

Missouri 2000

The State of the Future

*A special report of the
Missouri Opportunity 2000 Commission*

**Published by Roy D. Blunt
Secretary of State**

Assessing future opportunities is Missouri's goal today

Investing time and resources to plan for long-term needs is not a normal activity of government. It is, however, an appropriate one. By planning for the future, we enhance our ability to determine and influence what the future holds. The work of the Missouri Opportunity 2000 Commission represents this state's commitment to undertake such an immense task.

In December of 1985, Governor John Ashcroft asked former St. Louis Mayor John Poelker and I to serve as the chairmen of the Missouri Opportunity 2000 Commission. In January 1986, 28 other Missourians were appointed to serve as members of the Commission who represented a cross section of Missouri life from academia, labor, business, civic leaders, volunteers and local, state and federal government. But while the Commission's collective experience was widespread, its common interest remained focused: to determine Missouri's future opportunities.

To that end, Governor Ashcroft specifically charged the Commission to study future economic development and employment opportunities that could exist for Missourians as we rapidly approach the year 2000. The governor requested that special attention be given to the impact of education, health and quality of life as these issues relate to economic growth and development.

In response to the governor's timely decision to initiate the activities of the Missouri Opportunity 2000 Commission in the first year of his term, the Commission completed its work in 18 months. Submitted to the governor in August 1987, the final report now provides all Missourians the opportunity to more effectively prepare for the greater opportunities of the 21st century.

As co-chairman of the Commission, it is

important to commend the individuals involved in this project. Each commissioner gave a year and a half of time and talent to participate in this undertaking. Without the expert, incisive analysis of every member, we would not have been able to so fully realize our goal. Appreciation is also extended to all those people who, in so many ways, helped the Commission more fully develop its vision of a future of greater opportunity.

We believe this report provides important insights into the trends which will determine Missouri's future. It is also our belief that the Commission's final recommendations are worthy of thoughtful consideration, thorough study and appropriate implementation. Mark Twain once said: "It's always difficult to forecast, especially when you're talking about the future" and of course forecasting the future is an imprecise art. But while we must wait to see how the future compares to our predictions, we have benefited today from our efforts. The process itself has indeed been revealing; the information gained will assist individuals, companies and communities to better prepare for the challenges and opportunities they will face in years to come.

The Commission involved hundreds of Missourians in its public hearings, commissioned nine papers that provide significant information in a variety of areas, compiled a continuing resource of documentation about Missouri and presented a final report with 55 specific goals and recommendations for our state.

We hope this study, summarized in the next few pages, inspires today's Missourians to work together to prepare for the opportunities of the future.

Roy D. Blunt
Secretary of State

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The Missouri Opportunity 2000 Commission published its original report in August 1987. This publication contains a portion of that report along with a reprint of the article appearing in the *1987-1988 Official Manual of the State of Missouri*.



MISSOURI 2000

What will Missouri's future hold? A study by the Missouri Opportunity 2000 Commission provides telling insights into the challenges of the future.

The year 2000 has stood for centuries in the minds of the public as an unreachable limit, the edge of the future. Today, we are nearer to the 21st century than ever before, and every day brings us closer to its promises and predictions, its opportunities and demands.

To put the proximity of the year 2000 in perspective, consider that the senior class of the year 2000 entered school this past fall. There is less time between now and the year 2000 than has passed since Gerald Ford became president. In just a dozen years, we will begin the journey into a new millennium.

January 1, 2000, will not magically usher in a new age of health, wealth, prosperity and ease. Rather, it will reflect the nature of its origins. While we cannot predict what the 21st century will hold, we can still influence its character by our actions in the weeks, months and years ahead. What we do today—and what we leave undone—will affect the lives of those Missourians of the future. That was the premise of the Missouri Opportunity 2000 Commission.

The Commission examined the goals, priorities and trends of today's society and recommended steps to create greater opportunities in the year 2000. After 18 months of research, the Commission issued its 143-page report. Highlighting the findings were 55 specific proposals directed to the governor, the General Assembly, the public and private sectors and individual citizens. The first step beyond the report is for all Missourians to become more aware of the opportunities possible for the year 2000, and to begin planning today to make the most of those opportunities.

Education

The Commission recognized education as the cornerstone of opportunity. A literate, informed citizenry is vital if we are to influence the future of this state and expand its range of opportunities. It will make no difference what jobs are open to Missourians in the 21st century if the workforce does not possess the skills or knowledge to be productive. Better education for all Missourians will provide the greatest benefits to our own future.

Education has not kept pace with the demands of modern society, according to the Commission. Public education's 17th-century roots have proven cumbersome and restrictive; the needs of traditional learning and new technologies must coexist, not cancel each other out. The goal of education must be to instill fundamental skills while encouraging flexible, responsive and creative programs which address a spectrum of needs. To do so will not be easy—it will require altering habits and conventional wisdom ingrained in the educational system.

The staging ground for all education remains the school classroom. Yet despite its importance in the education process, the dynamics of the individual classroom have not been adequately challenged. Educational objectives have become ultimate goals, and not minimal standards. To stretch the capabilities of the classroom, the

Commission offered three recommendations for state and local governments:

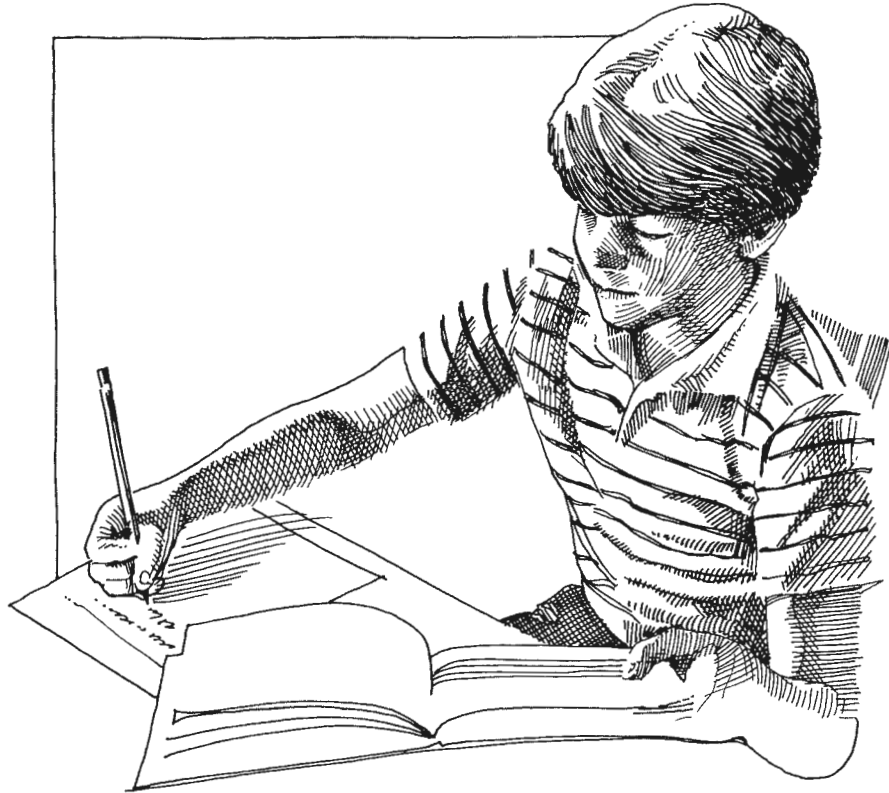
- *Adopt a policy giving parents and guardians in multi-school districts the choice of which public school their children will attend. Schools should treat parents as the partners they are in the educational process.**
- *Adopt policies lengthening the school day or the school year.*
- *Continue to emphasize a thorough grounding in the command of the English language, reasoning and problem-solving, computational skills and basic science concepts in elementary and secondary schools in Missouri. The educational system in the State of Missouri should also take the necessary steps to provide greater student awareness of the workplace, of career choices and of the lifelong consequences of productive work versus no work.*

A few improvements in the state's educational system can be made without increased financial support; most cannot. It is futile to merely set goals without providing the resources necessary to make those goals reachable. In order to make the goals in education more reachable, the Commission made the following recommendations:

- *Improve the ability of school districts to acquire needed resources by implementing legislation that reduces the requirements for voter approval on school bond issues from a two-thirds approval to that of a simple majority. Immediate priority should be given to reducing the requirement for bond approval for bonds in which the purpose is to maintain or repair current facilities.*

*While this recommendation is not intended for application in Kansas City and St. Louis where federal courts are involved in attendance policies, it is intended to create beneficial competition in other multi-school districts and possibly all school districts by the year 2000.

"The staging ground for all education remains the school classroom. Yet . . . the dynamics of the individual classroom have not been adequately challenged."



- *Missouri should rank 25th or higher among the states in education investments per student by the year 2000.*

Recognizing that simply spending money does not necessarily cause better learning, the Commission recommended that education evaluate its impact to ensure that taxpayers receive a measurable return on their investment.

- *Each institution should strive to understand and, to the extent possible, measure its effects on its students.*

Illiteracy remains a central issue affecting the economic and social structure of Missouri's future. The Commission believes that both education and business must focus on increasing the numbers of literate Missourians. This is an important task, not only for those at risk today, but also for generations to come. For example, nearly 1 in 4 ninth-grade students are projected to drop out before completing high school in the next decade.

- *Introduce a massive statewide effort to eliminate illiteracy.*

- *Introduce a major and dramatic program to substantially increase the "persistence-to-graduation" rate of our school-age youth.*

Continuing education will concern everyone in the next few years. Jobs will grow more technical. Technologies on which those jobs are based will change, often rapidly, and require that workers learn and relearn specific skills throughout their working careers. This demand for lifetime education will change the post-high school educational system, whether in vocational schools, colleges or universities. The Commission encouraged both the public and private sectors to take the lead in helping institutions of higher learning prepare today to teach tomorrow's workers:

- *By supporting our two- and four-year colleges and universities in developing extensive continuing education and retraining programs.*

At the same time, the Commission cautioned state institutions to ensure that expanded programs complemented the overall educational goals of the state.

- *All institutions of higher education should have a well-defined mission that relates the institution to the overall goals of the state, and to the special constituencies that it serves.*

The Commission likewise encouraged a greater commitment to vocational-technical education since it will play a key role in training and retraining workers in the new job skills of the future.

- *Vocational education and career-training programs should be strengthened, with increased emphasis given to retraining adults through specific job-skill development.*

The Commission not only looked at the curriculum of education, but also at the management of the classroom. While local situations demand local solutions, several statewide needs were identified, most notably the need to improve both the pay scale of

teachers and the physical conditions in which they work.

- *Improve the classroom environment and the salary structure in order to attract sufficient numbers of competent persons to the teaching profession.*

The Commission also expressed its concern over the need to encourage the nation's best students to attend Missouri colleges and universities.

- *The Commission recommends that each institution of higher education in Missouri encourage the enrollment of talented out-of-state students by waiving out-of-state fees for those students scoring in the top five percent of their graduating high school class.*

Another statewide issue includes the need for better children's health care through the schools:

- *By providing school health service to all elementary and secondary schools in Missouri.*

Economic development

The partnership between quality education and economic development will remain an important focus through the end of the century. With an educated, motivated workforce and an abundance of natural resources, Missouri has unique opportunities to compete in the fierce battle for new jobs and businesses. To use the state's natural advantages to their fullest, the Commission proposed a number of recommendations to enhance or expand the state's economic development programs.

- *Economic development efforts should target industries where Missouri has specific comparative advantages. Resources should be focused on those things which Missouri can do best.*
- *A coalition, partnership or association should be formed among the many existing economic development groups in order to better*

*"The special needs of new businesses,
historically the source of most of
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decades, must also be met."*



utilize available resources and develop better, more persuasive presentations.

- *Greater emphasis should be given to developing new jobs from the base of existing businesses in the state.*

The special needs of new businesses, historically the source of most of the economic growth in the last two decades, must also be met. To foster growth through new businesses or expansion of existing business, the Commission made four specific recommendations.

- *A thorough assessment of Missouri's national and international image should be conducted periodically. Missouri must do a better job of marketing herself, both to Missourians and to those outside of Missouri.*
- *Expansion of the Small Business Incubation/Development Center concept should be undertaken wherever economically feasible.*
- *An entity should be designated by the state to give assistance to small businesses interested in the export market.*

- *A continuing public awareness program should be established to demonstrate the link between transportation-related infrastructure (roads, bridges, airports, water transportation, rail) and economic development.*

Rural Missouri

Missouri farms and rural communities received special attention in the report. After meeting with a variety of agribusiness leaders, observers and participants, the Commission concluded that the economy of rural Missouri was in a period of critical transition. Left unattended, the current agricultural economy can only worsen, resulting in financial hardship to an important segment of Missouri. Because rural Missouri holds the promise of future growth and provides an excellent quality of life, the Commission recommended additional resources be dedicated to meet this challenge.

- *The University of Missouri Extension System should be modernized to provide better small business and agribusiness assistance in rural Missouri and in Missouri's smaller communities, and to redirect the extension service toward economic development issues facing the state in the next 13 years.*

Additionally, the Commission recognized the need to actively promote rural Missouri as an integral part of the state's economy and challenged the state to provide better lifestyles for the residents of these areas.

- *The Missouri Department of Health should establish plans to encourage the extension of privately managed health care delivery systems into rural areas.*
- *Policies to be adopted for rural Missouri which recognize that many communities are the lifeblood of an extended network in the state's rural economy. The state must ensure that the economic structure of these communities is strengthened by helping them seek and secure sources of off-farm employment,*

by sponsoring transitional programs for farmers leaving agriculture or combining agriculture with non-farm sources of income, and by providing job training. Public and private colleges and universities should be used as primary instruments for strategic rural economic development.

Physically disabled

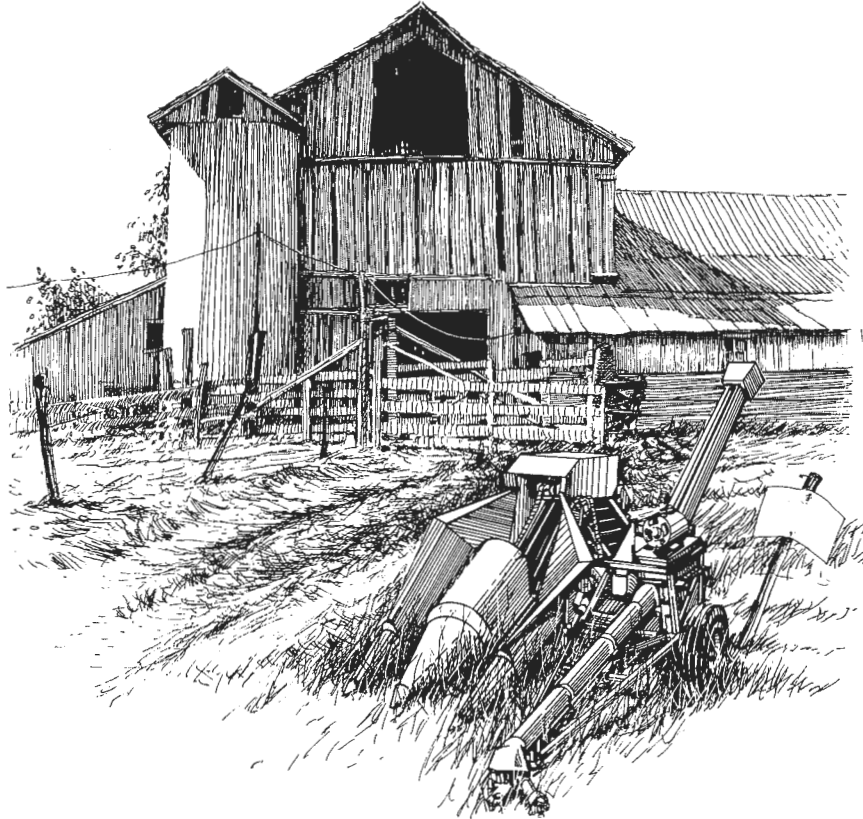
The Commission addressed the unique needs of those with physical disabilities. In a future where there will be fewer available workers and where the emphasis will be shifting from working with the body to working with the mind, the Commission felt that considerably more attention should be focused on employment opportunities for those with physical disabilities. One program recommended by the Commission requires the state to ensure that handicapped persons are able to progress from schooling into productive job placement. Further, the Commission called upon employers to eliminate existing barriers to employment of handicapped workers.

- *The governor should designate an ombudsman, with interdepartmental authority, to more effectively help the transition of disabled individuals from school to work and from unemployment to employment.*
- *Missouri employers should proceed to dismantle at greater speed the attitude barrier among employers, and many of their personnel, that exists towards persons with disabilities.*

Financially disadvantaged

Once again, the link between sound education, dynamic economic growth and beneficial government/business partnerships will be a key to Missouri's future opportunities, particularly in addressing the needs of the financially disadvantaged. Missourians at all levels of financial need, from those at the poverty level to working-class families unable to afford adequate housing, would benefit from the

“Left unattended, the current agricultural economy can only worsen, resulting in financial hardship to an important segment of Missouri.”



Commission's recommendations in the areas of jobs, health care and housing.

- *A major statewide effort should be adopted by state government to provide an avenue for disenfranchised workers to move off dependency rolls and into the private labor market. Such initiatives must include basic education, job training, transitional financial support and child care.*
- *An appropriate long-range, statewide funding formula should be established for public hospitals, teaching hospitals and other hospitals directly serving the poor, to compensate for care for the indigent.*
- *The State of Missouri should continue to improve the Missouri Medicaid program by expanding the medically needy component to cover additional pregnant women and children. The state should also continue its effort to develop and provide adequate resources for an integrated prenatal program for the state's low-income population through*

improved coordination of Medicaid, prenatal clinic programs and programs for the prevention of mental retardation.

The Commission recommended reintroducing a variety of housing subsidy programs which would reduce the cost of housing for low-income families. The program's centerpiece would be a subsidy trust fund created by transferring up to \$5 million from the Missouri Housing Development Commission. The General Assembly was also encouraged to allow voters to decide a \$100 million bond issue for housing and to consider revising state tax laws to encourage development of low-income housing.

- *A housing trust fund should be created; income from the fund can be used to make housing subsidy grants or loans.*
- *A general obligation bond issue should be submitted to voters to provide capital loans to build or rehabilitate public housing units, community residential treatment facilities and congregate housing for low-income elderly.*
- *The Missouri General Assembly should consider enacting new tax credits to encourage private developers to invest in low-income housing, particularly single-family housing.*

Quality of life

It may be easy to assume that the Commission predicts a brighter future because of what others will do for us. That assumption would be wrong. All Missourians must take charge of their own futures and invest their own time and efforts in making the most of their future opportunities. For example, Missouri's colleges and universities may make a commitment to provide needed courses, and business may support such a new thrust through direct contributions or commitment to provide students from among their employees. However, unless we as individuals make productive use of such programs, their

benefits for us will be wasted. Others cannot change our future for us as we would wish. The Commission issued a number of recommendations designed to allow individuals to seize the initiative and make the quality of daily life healthier and better.

- *Individual Missourians, social and civic organizations, labor organizations and employers should take active roles to develop healthier lifestyles by individuals and healthier home, work and school environments.*

Provisions for health care for the elderly must be developed today to adequately meet the increased demands of the 21st century. Missouri's prolific "baby boom" generation will be placing a strain on health care providers at the same time that shortages in medical personnel are anticipated. Because of these conditions, the Commission encourages all Missourians to take more individual responsibility in planning for long-term health care. State programs, too, would be aimed at providing needed information and wellness services, reviewing qualifications of medical personnel and encouraging additional health professionals to enter the field.

- *The Missouri Departments of Social Services and Health should develop and implement programs of information that will stress the importance of families' planning for long-term care.*
- *Professional medical and health care associations and the General Assembly, with the advice of the Missouri Department of Health and of appropriate licensing boards, should immediately study all professional qualification and licensing legislation, to revise and modernize the areas of permitted practice for health care professionals other than physicians and osteopaths.*
- *The Commission recommends that the Missouri Department of Health initiate discussions with academic institutions, health departments, minority and nonminority*

“Missouri’s prolific ‘baby boom’ generation will be placing a strain on health-care providers at the same time that shortages in medical personnel are anticipated.”



health professional organizations and other public or private sector entities to develop strategies to improve availability, accessibility and retention of minority health professionals.

- *Private health care providers should provide a statewide network of accessible and affordable wellness centers to meet the preventive health care needs of Missourians.*

General Assembly

The Commission recommended a variety of priorities for the General Assembly, touching on departmental funding, environmental issues and new programs.

- *The General Assembly is urged to approve a significant budget increase for the Missouri Department of Mental Health with corresponding internal reallocations of resources of prevention-type services over the next ten years.*
- *The Hazardous Waste Remedial Fund should be maintained at least at its present level if not expanded.*
- *The General Assembly should consider the approval of a sizable bond issue which would provide funding for a construction grants program or revolving loan program for sewage treatment grants to local governments.*

- *Benefit/cost analysis be applied to all existing and new pollution control laws to make sure that the benefits of pollution reduction exceed the cost to industry of achieving the reduction.*
- *Pollution control laws should indicate the desired results (in terms of lower pollution levels) rather than dictate the means by which these results should be achieved. Both the private sector and municipalities should be left free to choose whatever control measures are most economical.*
- *State laws should be coordinated with existing and proposed federal regulations.*

Realizing that new programs require new sources of funding, the Commission limited its call for additional services to those areas of significant need. Three such programs seek to improve Missouri's employment opportunities.

- *An Office of Productivity (or Performance) Improvement should be established for the purpose of advocating strategies and methods of improving productivity, while improving the quality of the job, the work environment and job security.*
- *A Missouri Labor-Management Coordinating Council should be established to encourage the development of more area labor-management councils in Missouri.*
- *A Missouri State Council for Full Employment should be established.*

One of Missouri's natural resources, often overlooked in the crush of high-tech advances, is the experience and wisdom of her older citizens. The intricate details of our heritage may not be directly applicable to our future, but the lessons which were learned will be invaluable. It is expensive, sometimes tragically so, to make the same mistakes again, 25, 50 or 75 years later. The Commission recommended formal steps to pass on this knowledge to all Missourians.

- *The Departments of Higher Education and Social Services should develop plans to encourage and motivate older citizens to share their knowledge and qualifications by serving the economic and social needs of the state and its younger citizens.*

The complex problems of high-tech medical treatment raise moral, ethical, social and financial questions. Without proper planning, the issues will become even more difficult as we move into the 21st century. The Commission recommended the state take a leadership role in providing a forum for the conflicts which inevitably will occur with the advance of medical technology.

- *The governor should establish a permanent Commission on Bioethical Issues, comprised of a broad range of citizens informed on medical technology, science, health care delivery systems, social science and the religious and ethical aspects of health care.*

Energy

The Commission found that state government and the energy industry both have the potential to conserve and expand the state's energy resources. The report targets four areas where Missouri may find energy opportunities.

- *State government should encourage development of Missouri's hydroelectric resources; Industrial cogeneration should be encouraged; Research activities in the areas of fluidized-bed combustion and of pipeline transportation of high sulfur coal should be supported and expanded, and; Both private and public organizations should strengthen existing energy conservation programs.*

Government/business cooperation

The synergy of government/business relationships remains an untapped source for improving Missouri's future, the Commission found. By

“State government and the energy industry both have the potential to conserve and expand the state’s energy resources.”



sharing unique resources for a common goal, businesses and government can cooperate in a number of areas to better serve Missourians. While the Commission offered specific proposals in a few areas, the possibilities for beneficial government/business cooperation are limitless.

- *Vocational education institutions should develop cooperative, mutually supporting relationships with private employers, employer associations and labor organizations in the state. These relationships would encourage and help establish on-site vocational training programs within the private sphere. The state should consider providing appropriate incentives to increase the amount of employer-sponsored vocational education in Missouri.*

- *Private industry and the state should strengthen their support for research universities. These facilities are central to the ability of the state to compete for, attract and develop industry.*

- *Private insurers should develop and make available additional and appropriate long-term care policies, and the Missouri Division of Insurance should study the new field of long-term care insurance, and propose a program that would encourage insurers to extend and expand such coverage to Missourians.*

Employee/employer

While the partnership between government and business can provide a number of opportunities

for the year 2000, the business sector was encouraged to make its own contributions to a better future. It is the private sector which provides the majority of jobs in the state today, and therefore has the greatest opportunity to make the most impact in a number of areas. For example, more attention will have to be paid to the needs of employees and prospective employees because of a changing workforce. There will be fewer new workers available and those in the workforce will often require extensive, specialized training to carry out their duties. Employers may find themselves in a "bidding war" for certain skills. Additional benefits—child care, wellness programs and others—may become commonplace as progressive companies try to attract and keep qualified employees.

- *Employers should investigate, develop and support a variety of employer-sponsored and employee-supported child care facilities. Any workfare or low-income training programs funded by state or local government should include adequately financed child care components as well.*

Business, although it may find a ready partner in the local school system or a nearby public or private college, will have to ensure that its workers receive appropriate training. America in general, and Missouri in particular, cannot match the low labor costs enjoyed by foreign industries. This will create increased pressure for high-tech innovations and employees with the training and skills to use these new resources. It is no longer a question of whether automation will take jobs away from the American worker. American workers must use automation or see their jobs go elsewhere. However, workers may gain job security by mastering high-tech skills or by transferring skills to new applications.

- *Private employers in Missouri should accept more responsibility for providing training and retraining for their employees.*

Studies project that Missouri, like the rest of the nation, will see a substantial shift away from

the traditional employment base of manufacturing by the year 2000. The lost manufacturing jobs will be replaced in numbers by service industry jobs, but the effect could be a reduction in the standard of living. Service industry workers, according to studies, do not earn as much as their counterparts involved in manufacturing, benefits are often less and the work week is not as long since some of the work is part-time. The conclusion is that there will be jobs in Missouri in the year 2000, but the standard of living would be measurably less for some of those jobs.

- *Employers should recognize and respond to the fact that most workers desire full-time employment, with fair and reasonable benefits and a livable wage.*

A final recommendation

Missouri has taken the first step, perhaps the most important one, toward a better future for all her citizens. But even as important as this step may be, it will have no effect on the future without our participation.

We as Missourians face the challenge of preparing for the future. We know that certain possibilities—a declining standard of living, failures of farm and rural communities, loss of vital, irreplaceable natural resources, an eroded educational system—are likely if we do not take bold steps now to improve for today and excel for the future.

We know that the future is malleable, that we can shape our opportunities and enhance the Missouri of the year 2000. Certainly, our future is being shaped today, by our actions or despite them. Through the efforts of the Missouri Opportunity 2000 Commission, we are better able to prepare for the consequences of today's trends and issues as they will impact our common future.

Therefore, the Commission's most important recommendation, the one by which the others might be judged, may be its final one:

"Additional benefits—child care, wellness programs and others—may become commonplace as progressive companies try to attract and keep qualified employees."



- *The governor should establish a process to facilitate implementation of the recommendations presented in this report, and that a mechanism be put in place to promote, analyze and report to the governor on the progress of implementation.*

We can be assured that, by the year 2000, we will be living in a state which is the product of our own efforts. At that time, all Missourians will be able to judge the sincerity, the integrity and the scope of the Commission's work. Too, we will have the perspective to judge the impact of its implementation. What remains for the Missourians of today is to show the leadership necessary to bring about the results we all desire.

We are confident that the governor, the legislature and Missourians everywhere will respond with positive enthusiasm to the opportunity to prepare for the future. Our hope is that the citizens of the year 2000 will be able to look back on our efforts today as the inspiration and foundation for a better Missouri.

About the authors: Gregg Hartley served as executive director of the Missouri Opportunity 2000 Commission during its 18-month lifespan. He now is director of the Division of Professional Registration for the Department of Economic Development. Floyd Gilzow is executive deputy secretary of state for Secretary of State Roy Blunt.

BASELINE AND ALTERNATIVE ECONOMIC FORECASTS

INTRODUCTION AND OVERVIEW

The Commission contracted with Wharton Econometrics Forecasting Associates, Inc., a well-known international consulting firm, to provide economic consulting services. This portion of the Commission's report presents the baseline and various alternative economic forecasts for the U.S. and Missouri through the year 2000. The U.S. forecasts were prepared using Wharton's Long-Term Model of the U.S. economy.

The baseline forecast embodies those views of the economy which are felt to be most likely. The trend growth scenario presents an economy without large cyclical swings, but with similar average growth. The lower- and higher-growth scenarios show the impact of the accumulation of both positive and negative factors which could affect growth in the long run. These views of the economy are very useful for the long-term planning when possible alternative states-of-the-world must be explored. These four U.S. forecasts are discussed in detail below.

The baseline and three alternative U.S. forecasts were then used as drivers in the preparation of corresponding baseline and alternative forecasts for the Missouri economy. The Missouri forecasts were prepared using Wharton's Missouri State Model. The details of the Missouri State Model forecasts are available in separate documentation. Appendices II-a through II-d provide examples of some of the key data. The forecast results are discussed below following the detailed analysis of the U.S. outlook.

BASELINE FORECAST

The U.S. economy will experience slower population and employment growth through the forecast period. This has an impact on overall economic growth, which is generally at lower levels near the end of the forecast period compared with the early years of the forecast.

The slowdown in population growth which began in the early 1960s is now affecting the

growth rate of the labor force. The reduction in the growth rate is the primary reason for potential growth declining from highs in the 1950s and 1960s to more moderate levels in the 1980s and 1990s. Declining labor force growth means that labor markets will tighten and wages will rise.

Major Assumptions

- Long-term demographic trends continue to affect economic growth through declining population growth and the aging of the population.
- Fiscal and monetary policy are assumed to be relatively stable, which helps to reduce inflationary expectations.
- Spending constraints at the federal level help to curtail deficits, which remain under control indefinitely and continue to shrink as a share of the total economy.
- Export growth starts to outpace import growth because of the dollar's decline. This eventually brings net exports into surplus for much of the forecast period.

Demographic Outlook

Population growth has been on a downward trend for many years. During the 1960s and 1970s, population growth of 1.1% a year was common. In the 1980s 1.0% growth per year is the norm, and by the end of the 1990s will be in the 0.8% range. This decline is projected to continue so that by the end of the forecast period total population growth will be a mere 0.7% per year.

Over a 15-year forecast period a change in population growth of this degree has many implications for the outlook. If the population is not growing very rapidly, labor force growth, the housing industry, the level and types of consumer goods required, and the average age of the population are affected. Slowing population growth also has implications for the types of goods and services required by governmental entities in the economy. Demographics is perhaps the most important feature in terms of any variable's economic impacts, especially when projections are for a 15-year period.

When a forecast is prepared for a 15-year period, the echoes of various demographic events can be seen. For example, women of the postwar baby-boom generation are now in their prime child-bearing age and their progeny will start to enter child-bearing age groups by the end of the forecast. Also, children born in recent years as a result of the baby boom echo will start to place increasing strains on the education system several years into the forecast which has implications for government policy. The increase in the number of women in the 16-35 age group has raised the number of live births per year from 3.1 million in 1973 to just over 3.85 million in 1986. The number of live births per year will continue to climb for the next four years and then decline until 2000.

The increase in the number of live births and estimated net migration of 750,000 per year are helping to keep population growth from declining more rapidly despite a total fertility rate of less than 2%. Declining mortality rates are also helping to prop up population growth.

As the baby-boom generation matures, the average age of the population increases because of the sheer size of this generation and declining mortality rates. The aging of the population has been going on for many years. In 1950, 12.2% of the population was age 60 and over. By 1980 the figure was 15.7% and by the end of the forecast 16.7% of the population will be in this category. Just beyond the end of the forecast period the first age cohorts of the baby-boom generation will be retiring. This has implications for the Social Security system which relies on working individuals to support those on the retirement rolls.

The aging of the population will have a tendency to keep household growth higher than population growth. This is because headship rates — the number of individuals who head a household divided by the total population — are always higher for older age groups. Since there is an increasing number of individuals in older age groups, a more rapid increase in the number of households will be observed. From 1986 to 2000 the average growth per year in the number of households will be 1.4% while population will show average growth of 0.9%.

These demographic shifts will have a major impact on the economy. Slower population growth means a reduced level of demand, especially for nondurable consumption goods and, ultimately,

slower economic growth. The aging population will also cause a shift in the composition of demand. For example, consumption of services, especially health services, will be strong, while nondurables and durables consumption will have a tendency to weaken.

Average household growth is 1.7% from 1986 to 1996 but then quickly drops toward 1.0%. This slowdown means that the market for durable goods will falter. Residential investment growth will also weaken for the same reason. This is particularly evident in housing starts, which come in at about 1.75 million units per year early in the forecast and end up at slightly below 1.5 million units per year in the last few years of the forecast.

Labor Supply

Male participation in the labor force has declined during the past 35 years going from over 86% in 1950 to just over 76% in 1985. The reasons for this decline are increasing school enrollment rates and the trend toward earlier retirement. Both of these trends have stabilized in recent years. By the end of the forecast period the male participation rate is just over 72% which represents much less of a decline than was seen from 1950 to 1985.

On the other hand, the female participation rate has been rising rapidly. From 1950 to 1985 the rate went from 34% to almost 55% and is projected to be approaching 63% by the end of the forecast. This rapid upward movement can be explained by noting that women have seen ever increasing employment opportunities, changes in society's views, lower fertility rates, and wage increases.

Changes in both male and female participation rates will not be as dramatic during the forecast period as during the period 1950-85. This, coupled with the fact that the baby-boom generation is already in the labor force, will slow the growth in the labor force. Labor force growth averages about 2% during the first couple of years of the forecast and ends up at about 1% by the end of the forecast. This slower growth causes the labor market to tighten and forces up wages as employers compete for workers.

Composition of Demand

Table 1 lists expenditure shares of real GNP (Gross National Product) for ten year intervals from 1970 to 2000. Consumption will increase as a

share of real GNP through 1990 and then decline slightly. For the three main consumption categories the changing demographic structure of the economy has had and will continue to have large impacts.

- The declining rate of population growth and the low income elasticity of most nondurable goods will continue to cause the nondurables share to decline.
- Durables share of real GNP will continue to grow because of real disposable income growth. However, the slowdown in the rate of household formation will moderate growth in durables consumption.
- Real disposable income, income growth, the aging of the population, and changes in lifestyles have had a major impact on service's share in the past. While service's share will climb, the increase will not be as dramatic as was seen from 1970 to 1980. On the down side, the slowdown in household growth reduces the growth in housing services.

Business investment has continually grown as a share of real GNP. Advances in technology are assumed to provide many opportunities for increasing productivity with capital investment. Also, international competition will provide a strong incentive to invest.

Residential investment in the long run is determined by demographic factors and the factors that determine household formation, like real per capita income growth, the relative price of housing, and the growth of employment. During the latter part of the forecast period, the baby-boom generation's impact on residential investment is expected to lessen. The slowdown in the growth in the number of households will pull down the level of housing starts over the forecast period. The aging of the population will also have a tendency to increase the demand for multi-unit starts relative to single-unit starts.

Table 1
EXPENDITURE SHARE OF REAL GNP
(Percent)

	1970	1980	1990	2000
Consumption	61.7	62.8	65.8	64.5
Durables	6.7	7.7	9.4	9.4
Nondurables	28.8	23.5	23.7	22.3
Services	26.2	31.1	32.7	32.8
Investment	15.4	16.1	16.4	17.3
Nonresidential	10.9	12.2	12.2	12.5
Residential	4.5	3.9	4.2	4.8

Table 1 (Continued)
EXPENDITURE SHARE OF REAL GNP
(Percent)

	1970	1980	1990	2000
Net Exports	-1.2	1.5	-1.7	0.1
Exports	7.4	12.1	11.9	13.6
Imports	8.6	10.6	13.6	13.4
Total Government	23.7	19.4	19.5	17.6
Federal	11.1	8.0	8.0	6.6
State and Local	12.6	11.4	11.5	11.0

From 1990 on, export's share of real GNP increase more than twice as fast as does import's share. By the end of the forecast period, trade will have a positive impact on real growth. This is due to more international competition and the increasing ability of domestic manufacturers to compete in export markets. This increased ability comes from business investment which promotes productivity and a stable dollar through much of the forecast period.

Total governments' share of real GNP has been and will continue to be on a long-term decline. Both federal and state and local governments determine this pattern. The federal government share drops more rapidly than the state and local share because more of the governmental burdens to maintain a safety net will be shifted to state and local governments. Changes in demographics will also dictate higher expenditures by state and local governments on education than was seen in recent history.

Composition of Output

Table 2 shows shares of real output for some sectors of the economy. The share of total manufacturing output to real GNP has risen continually from 1950 and is projected to continue to do so. Durables share continues to grow, while non-durables share stays relatively unchanged. This is due to growth in the demand for durables and declining demand for nondurables as a result of the growth in real disposable income. Services share also rises over time because of growing demand for services relative to other areas of consumption. For other sectors, most of the change in output shares takes place between 1980 and 1990. After that point, output of the commercial, regulated, and wholesale and retail sectors stay at about the same levels relative to real GNP. Output of the finance, insurance, and real estate sector does decline from 1990-2000 and this decline is a reflection of slowing demand and intense competition in this area which will weed out providers of these types of output.

Table 2
SHARES OF REAL OUTPUT
(Percent)

	1970	1980	1990	2000
Total Manufacturing	20.9	20.9	21.3	22.1
Durables	12.6	12.6	12.8	13.5
Nondurables	8.3	8.3	8.5	8.6
Services	12.2	13.9	15.2	15.9
Commercial and Other	48.3	51.1	53.0	53.6
Finance, Insurance, and Real Estate	13.2	14.6	15.4	14.9
Regulated	4.2	4.1	3.4	3.6
Wholesale and Retail	15.2	15.7	17.2	17.3

TREND FORECAST

Our trend forecast is based on smoothing key baseline assumptions over the entire forecast period based on their starting and ending values in the baseline forecast. This method produces a forecast which is devoid of any large cyclical swings but also makes the years between cycles look very different from the baseline. The resulting growth path is generally higher than the baseline during the first part of the forecast and generally lower during the second part of the forecast.

Major Assumptions

- In general all components of GNP exhibit smooth and continuous growth approaching the ending period value of the baseline.
- Strong cyclical swings are not observed for housing starts, or, consequently, residential investment.
- Monetary authorities do not foresee a reason to tighten the money supply, therefore short- and long-term interest rates do not increase much.
- Real government expenditures and energy prices have no tendency to show a cyclical pattern due to stable economic growth.

LOWER GROWTH

In the lower-growth alternative interest rates are forced upward in response to rising inflation, lowering investment and consumer spending. Government expenditures slow down and foreign growth is lower as well, limiting export opportunities. The aggregate effect will be to lessen the average annual GNP growth to 1.9% through 2000 compared with 2.8% in the baseline.

Major Assumptions

- Monetary policy, in the face of higher inflation, will be more stringent leading to higher real interest rates.
- Federal government expenditures are lower. Lower economic growth reduces tax collections, resulting in continuing deficits.
- Lower growth in the U.S. pulls down foreign growth.
- Population growth is lower.

Population

Lower fertility rates and shorter life expectancies will slow population growth to an average of 0.5% over the forecast period, compared with 0.9% in the baseline. This will have a negative impact upon household formation, resulting in an average 1.1% growth per year, 0.3% beneath the baseline.

Wages and Prices

In response to successful collective bargaining, wage rates increase modestly from the baseline average of 7.0%, to 7.2% in the low alternative. Increase wage costs are transferred to the consumer, resulting in a wage-price spiral which drives overall prices upward. Consequently, inflation averages 5.6% a year in the low-growth alternative versus 4.8% in the baseline. Higher inflation boosts interest rates, which in turn inhibit business expansion and job creation.

Productivity and Employment

Weak recovery periods and high interest rates allow only moderate growth in business fixed investment, impeding the development and implementation of new technology, especially in manufacturing. This, in conjunction with threatened cutbacks in employment, discourages increases in worker productivity. The sustained period of high unemployment following downturns in the business cycle interrupts the training of entry-level workers, further inhibiting productivity gains. These factors result in the unemployment rate remaining above 7.0% from 1986 to 2000, and an average growth in output per person of 1.2% in the low-growth alternative versus 1.5% in the baseline.

Monetary Policy and Interest Rates

Money supply growth in the low alternative is generally accommodative, and exhibits an average

growth rate slightly below the nominal GNP. In 1989 and 1990, however, accelerating inflation causes the Federal Reserve Board to restrict the growth of the monetary aggregates. This action coupled with persistent inflation, drives the short-term Treasury bill rate up from 6.7% in 1986 to 8.7% in 1990. The run-up in short-term rates coupled with inflation above 6% push the AAA corporate bond rate to a peak of 12.2% in 1990.

Fiscal Policy

The average growth rate of government expenditures is reduced from 1.8% to 1.1% in the low-growth alternative. Federal government expenditures are reduced from an average growth rate of 0.8% to 0.2%. Real defense spending is reduced to 0.3% from 0.9%, and nondefense expenditures fall less than 0.1% on average.

In this scenario, however, decreasing federal government expenditures does not produce the desired effect of lessening the deficit. Instead, the restriction in government spending dampens economic growth, which results in lower tax revenues. Decreased revenues coupled with a growing debt service offsets the reduction in expenditures. As a result, the federal deficit increases under this scenario.

State and local government expenditure growth drops from 2.4% to 1.8%. Due to the demographic trend toward lower birth rate and fewer school age children, growth in state education expenditures slows to 1.5% on average, 0.6% beneath the baseline growth rate.

Investment

Lower economic growth greatly increases the costs and risks of investment. Therefore, both residential and business investment suffer declines in growth. Relative to the baseline the recessionary declines are deeper and the recoveries weaker, producing an adverse risk environment.

- Business fixed investment, suffering from weak growth in production and increases in interest rates, grows at an average of 1.7% versus 2.9%.
- Residential investment grows only 0.9% per year over the period 1986-2000. Both lower economic growth and the assumed demographic trends limit the number of people seeking new housing units. New housing starts never exceed 1.4 million units and fall to about one million units by 2000.

Consumption

The deep recessions and longer periods of slow economic and personal income growth seriously constrict consumption spending. Workers uncertain job security and aware of rising prices become more conservative in spending. As a result, the savings rate increases significantly.

Consequently, consumption grows at 1.5% versus the 2.6% average for the baseline. Lower levels of consumer confidence and high interest rates dampen purchases of furniture and automobiles.

Foreign Activity

Lower growth in the United States has a negative influence on the world economy, pulling real foreign growth down to an average of 2.7% per year during the 1986-2000 forecast period. Inflation among the major trading partners averages 5.8%, compared with 5.6% in the United States.

- A mild economic expansion and higher rate of inflation abroad cause imports to weaken, resulting in average growth of 2.3% versus 3.5% in the baseline.
- Exports average growth rate drops to 4.9% compared with 5.4% in the baseline as foreign consumption reacts to sluggish economic growth.
- Import growth averages less than export growth resulting in a surplus of real net exports by 1996.

HIGHER GROWTH

The higher-growth alternative represents a dramatic improvement over the baseline — prices grow more slowly, interest rates moderate, and productivity increases. Over the forecast period, real GNP is expected to average 3.5% annual growth, compared with 2.8% in the baseline. Stable prices and modest wage gains help to restore the international competitiveness of U.S. exports.

Major Assumptions

- Monetary policy, in the face of lower inflation, will be more expansionary leading to lower real interest rates.
- As a consequence of expansionary monetary policy interest rates will be lower.
- Real federal government expenditures are higher. High growth increases tax collections, shrinking the deficit throughout the forecast period.

- The world economic environment shows greater cooperation and higher growth.
- Population growth is higher than in the baseline.

Population Outlook

Slightly higher fertility rates and longer life expectancies for men and women result in population growth of 1.3% versus 0.9% in the base case. The number of households averages growth of 1.7% per year during 1986-2000, compared with 1.4% in the baseline.

Wages and Prices

Wage rates grow moderately at 6.8% annually, slightly below the baseline's 7.0% average. Because of improved labor relations and workers' strong preference for job security, wage gains are modest — just enough to keep pace with the expected inflation rate. Inflation as measured by the GNP implicit price deflator averages 3.9% during 1986-2000, compared with 4.8% in the baseline.

Energy Prices

Imported oil prices increase at rates of 4.1% in the first decade and 6.7% thereafter averaging 3.0% above the expected inflation rate. Because of a weakened oil price cartel, however, coupled with lower non-cartel oil prices, a supply shock is not foreseen.

Productivity and Employment

The outlook for productivity growth continues to improve in the higher-growth scenario because of modest wage growth, stable prices, improved labor relations, and the use of advanced technology. Overall, productivity grows at an average of 1.7% compared with 1.5% in the baseline. With the continued expansion and improved international competitiveness of the U.S., economy employment growth is also stronger. Workers are drawn into the labor force at an annual rate of 1.6% compared with 1.2% in the baseline.

Monetary Policy and Interest Rates

It is assumed that monetary authorities ease credit conditions by expanding the money supply. Growth in the money supply averages 7.7%, compared with 7.6% in the baseline. As a consequence, both long- and short-term interest rates fall below their baseline levels, boosting both aggregate spending and the desired capital stock.

Fiscal Policy

Extra growth and lower interest rates reduce the federal budget deficit. Because of lower inflation, real federal government spending growth averages 1.4% annually versus 0.8% in the baseline. In real terms defense spending grows 1.5% annually and nondefense 0.9%. The slowdown in total nominal spending brings the deficit down gradually to \$44.4 billion in 1996.

Investment

Improved credit conditions in the higher growth scenario promote higher investment.

- Business fixed investment shows a robust growth, 3.8% compared with 2.9% annual growth in the baseline.
- Residential investment exhibits 2.7% growth versus 1.8% growth in the baseline.

Consumption

Consumer spending grows rapidly in this alternative.

- Low interest rates expand the money supply and allow consumers to increase their borrowing.
- Rising employment and lower inflation build consumer confidence and promote consumption.

Real expenditures on personal consumption are forecast to average 3.4% and should boost overall economic growth.

Foreign Activity

The world economic environment in this scenario is characterized by greater economic cooperation and higher growth. As confidence in the world economy rises, U.S. interest rates fall, and higher productivity increases demand for U.S. exports. In addition, the expansion of world growth causes foreign prices to decrease, thus promoting a rise in U.S. imports.

- Exports are forecast to average 5.7% growth per year, compared with 5.4% in the baseline.
- Overall, imports will grow 4.4% annually, 0.9% above the baseline.
- Faster growth in U.S. exports and reduction in foreign prices cause the U.S. current account balance to improve.

COMPARISON OF BASELINE AND ALTERNATIVE FORECASTS

Table 3 presents the average growth rates of three key economic indicators in the baseline forecast and the three alternative forecasts over the period of 1986 to 2000. The variation in growth rates indicates how the states-of-the-world in the year 2000 would differ in each of the four forecasts.

Table 3
AVERAGE ANNUAL GROWTH
(1986 to 2000)

	Baseline	Trend Growth	High Growth	Low Growth
Real GNP	2.8	3.1	3.5	1.9
Productivity	1.5	1.6	1.7	1.2
Inflation	4.8	4.6	3.9	5.6

To reiterate, the baseline forecast presents an economy of moderate real growth of 2.8% and moderate inflation of 4.8% annually. In contrast, the trend growth scenario has higher real GNP growth, lower inflation, and slightly higher productivity. The trend growth scenario avoids the cyclic patterns of the baseline, allowing growth to be continuous instead of stop-and-go.

The high growth scenario is an optimistic alternative to the baseline forecast. In the high growth economy, growth of real GNP is 0.7% higher annually than in the baseline. The higher real growth is accompanied by higher productivity growth and lower inflation.

In contrast, the low growth scenario is a pessimistic alternative to the baseline. Real GNP growth is 0.9% lower than the baseline and productivity growth is 0.3% lower than the baseline. Inflation, which is 0.8% higher than the baseline, accompanies the lower real growth and lower productivity.

The unemployment rates in the baseline and the three scenarios follow general economic trends. The baseline shows a slight decline in unemployment from 7.1% in 1985 to 6.8% in 2000. The trend growth scenario has a similar pattern of a slight decline in unemployment. As expected, the high-growth scenario has unemployment well below the baseline, declining to 5.9% in 2000. The low-growth scenario shows increasing unemployment, rising to 7.9% by the end of the forecast period.

In general, employment shares do not show significant trends over the forecast period. The exception to this is the manufacturing sector. The

manufacturing share declines in the baseline and in each scenario as the importance of manufacturing in the U.S. economy continues to decline. This decline is particularly marked in the low-growth scenario where the manufacturing share falls 3.3% by the year 2000. Motor vehicles (including autoparts), electrical equipment and instruments, and food and beverages (including food processing) show slight declines in employment shares over the forecast period.

Table 4
OTHER ECONOMIC INDICATORS

	Baseline		Trend Growth		High Growth		Low Growth	
	1986	2000	1986	2000	1986	2000	1986	2000
Unemployment Rate (Percent)	7.1	6.8	7.1	6.7	6.6	5.9	7.5	7.9
Employment Shares (Percent)								
Manufacturing	17.5	14.2	17.5	14.7	17.8	14.5	17.2	13.9
Motor Vehicles	0.8	0.6	0.8	0.6	0.8	0.6	0.7	0.5
Transportation Equipment Excluding Autos	1.0	1.0	1.0	0.8	1.0	1.0	1.0	0.8
Electrical Equipment and Instruments	2.6	2.3	2.6	2.3	2.7	2.2	2.6	2.3
Food & Beverages	1.5	1.2	1.5	1.2	1.5	1.2	1.5	1.2

MISSOURI VERSUS U.S. ECONOMIC PERFORMANCE: 1975-86

Missouri's economic performance fell short of U.S. economic performance during the 1975-86 period. Over this period, U.S. employment grew at an average annual compound growth rate of 2.42 percent while Missouri employment grew by only 1.70 percent per year. Missouri's slower than U.S. average employment growth tended to encourage outmigration. As a result, Missouri's population grew at a rate substantially below that for the U.S.; 0.53 percent per year for Missouri versus 1.02 percent for the U.S.

Missouri's manufacturing sector also grew more slowly than the U.S. manufacturing sector (0.42 percent per year in Missouri versus 0.61 percent per year). This somewhat weak manufacturing sector performance in Missouri occurred despite strong employment growth performance in three of Missouri's major manufacturing sectors: electrical machinery (1.28 percent over the 1975-86 period per year); motor vehicles (1.91

percent per year); and non-auto transportation equipment (1.36 percent per year). The strong growth performance of the latter two sectors, in turn, can be attributed to strong growth in U.S. industrial production in these sectors during the 1975-86 period; U.S. motor vehicle industrial production grew at 4.83 percent annual rate while non-auto transportation equipment industrial production grew at an annual rate of 3.31 percent.

Consumer prices in Missouri grew at an average annual rate of 6.46 percent per year during the 1975-86 period. U.S. consumer prices, over the same period, grew at a slightly higher annual rate of 6.53 percent per year.

EFFECT OF ALTERNATIVE FUTURE U.S. ECONOMIC GROWTH PATHS ON THE MISSOURI ECONOMY

Four forecasts of the Missouri economy were produced over the 1986-2000 period using Wharton's Missouri State Model. These forecasts are produced using the output of the four U.S. alternative forecasts previously presented; namely the Baseline, Trend Growth, Low-Growth, and High-Growth.

Table 5 presents selected predicted growth rates over the 1986-2000 period for U.S. and Missouri economic variables under the four alternative scenarios. Tables 6 and 7 provide selected growth rate and variable level data for the Baseline Forecast. Table 8 compares the three alternative forecasts with the Baseline Forecast. Tables 9 through 11 provide growth rate summaries for the three alternative forecasts while Tables 12 through 14 show selected forecast data values for these three alternatives. Detailed forecast tables for the four Missouri forecasts are contained in Appendices II-a through II-d.

Under the Baseline Forecast, U.S. employment growth averages 1.29 percent over the 1986-2000 period which is significantly below its 1975-86 growth rate of 2.42 percent. Missouri's total employment growth rate also declines from 1.70 percent over the 1975-86 period to 0.96 percent over the 1986-2000 period, but this decline is much less dramatic than for the U.S. As a result, Missouri employment growth is much closer to U.S. growth during the forecast period.

Labor force growth in Missouri over the 1986-2000 period under the Baseline Forecast is somewhat slower than employment growth which leads to a decline in the unemployment rate from 6.03 percent in 1986 to 5.20 percent in 2000. Popula-

tion growth in Missouri averages 0.40 percent per year during the 1986-2000 period. Labor force as a percent of total population rises from 49.8 percent in 1986 to 52.8 percent by the year 2000. This higher ratio of labor force to population reflects continued increases in labor force participation and an increase in the ratio of working age population to total population.

Real personal disposable income grows by 2.45 percent per year from 1986 through 2000 which is slightly slower than the rate of real income growth for the U.S. Missouri's somewhat weaker real income growth can be attributed to its slightly weaker employment growth.

Projected Missouri consumer price index (CPI) growth under the Baseline Forecast is somewhat higher than U.S. CPI growth, but both inflation rates are significantly below the 6.5 percent CPI growth experienced over the 1975-86 period.

Missouri manufacturing sector employment grows during 1986-2000 at an average annual rate of 0.16 percent versus an average annual rate of increase of 0.42 percent during the 1976-86 period. This drop in Missouri manufacturing sector employment growth over the forecast period is due in part to productivity gains in the sector, more output can be produced with fewer workers, and partly due to slowdowns in industrial production growth in the transportation equipment manufacturing industries. Over the 1986-2000 period, the industrial production index for autos grows at an average annual rate of 1.39 percent versus a 4.83 percent growth rate over the 1975-86 period. Similarly, the industrial production index for non-auto transportation equipment is projected to grow at an annual rate of 2.65 percent during the 1986-2000 period which is substantially below its 3.31 percent annual growth rate over the 1975-86 period.

The primary difference between the Trend Growth and Baseline scenarios is that the former scenario includes smooth projections for inputs and that policy moves are made to avert or damp cyclical swings. While the Trend Growth and Baseline forecasts are expected to produce very similar output and employment growth paths over the very long term, the absence of major business cycles of the 1986-2000 period, however, leads to a higher growth projection under the Trend Growth during this period for both output and employment. Over a longer time span, the two scenarios produce convergent growth paths.

Average annual U.S. and Missouri employment growth under the Trend Growth scenario exceeds

that under the Baseline by between 0.1 and 0.2 percent per year. Projected labor force growth changes by similar percentage amounts. These small differences in employment and labor force growth leads to only small changes in the projected U.S. and Missouri population growth. Since U.S. employment growth, increases by slightly more than does Missouri's employment growth, Missouri's population growth slows slightly relative to its Baseline Forecast performance. Personal income growth under the Trend forecast increases by about 0.3 percent relative to its Baseline Forecast rate. Consumer price inflation rates are reduced slightly under the Trend Growth versus Baseline (cyclical) forecast. Missouri manufacturing sector employment growth improves by almost 0.3 percent per year (Trend Growth versus Baseline) due to higher U.S. industrial production growth.

The Low-Growth and Higher-Growth scenarios provide a wide but plausible range for employment growth potentials in both the U.S. and Missouri. As described above in the discussion of the corresponding U.S. scenarios, the Low-Growth scenario assumes unfavorable circumstances in numerous areas while, conversely, the High-Growth scenario embodies favorable economic circumstances in these same areas. As a result, the Low-Growth scenario implies not only lower growth but also higher inflation than embodied in the High-Growth scenario.

Under the Low-Growth scenario, average annual employment growth over the 1986-2000 period in the U.S. and Missouri falls below the Baseline rates by between 0.6 and 0.7 percent per year. Under the High-Growth alternative, U.S. and Missouri annual employment growth are up by between 0.5 and 0.6 percent relative to their Baseline Forecast rates. Labor force growth shows similar but slightly less pronounced swings.

Population growth moves in the same direction as employment and labor force growth relative to

its Baseline forecast path, but the change in the annual population growth rate is smaller. The population growth rates change by between 0.3 and 0.4 percent relative to their Baseline scenario rates.

The U.S. and Missouri CPI growth rate is higher by about 0.9 percent per year under the Low-Growth scenario than under the Baseline scenario. CPI price growth under the High-Growth scenario is approximately one percent less per year than under the Baseline scenario. This favorable inflation outcome under the High-Growth scenario stems from assumed higher productivity growth and assumed lower primary commodity (oil and other) price growth.

Real personal disposable income exhibits larger growth swings than does employment. As shown in Table 8, under the Low-Growth scenario, real personal disposable income in 2000 falls below its Baseline value by 14.8 percent versus a 9.8 percent drop in employment. Conversely, under the High-Growth scenario, real personal disposable income in 2000 is 16.8 percent higher than under the Baseline versus a 9.5 percent increase in employment. These relatively larger swings in real income are due to productivity and inflation changes. Under the High-Growth scenario, productivity growth is higher and inflation is lower which leads to larger real gains in income than in employment. Conversely, lower productivity, combined with higher inflation under the Low-Growth scenario, leads to a larger drop in real income than in employment.

Missouri manufacturing sector employment growth is lower under the Low-Growth scenario than under the Baseline scenario, but the slowdown in employment growth is less than the drop in output growth rates due to a coincident reduction in productivity growth. Conversely, the Missouri manufacturing sector employment growth gains under the High-Growth scenario are muted by productivity growth improvement under this scenario.

Table 5
ALTERNATIVE MISSOURI FORECASTS
AVERAGE ANNUAL GROWTH RATES
(1986 to 2000)

Economic Variable	Baseline Forecast	Trend Growth	Low Growth	High Growth
Population				
U.S.	0.91	0.94	0.64	1.27
Missouri	0.40	0.35	-0.00	0.87
Labor Force				
U.S.	1.27	1.43	0.71	1.80
Missouri	0.82	0.90	0.15	1.44
Employment				
U.S.	1.29	1.47	0.66	1.88
Missouri	0.96	1.03	0.22	1.62
Real Personal Disposable Income				
U.S.	2.65	2.98	1.66	3.71
Missouri	2.45	2.75	1.28	3.59
Consumer Prices				
U.S.	4.79	4.64	5.70	3.82
Missouri	4.93	4.81	5.86	3.94
Industrial Activity				
U.S. Industrial Production	2.29	2.58	1.33	3.15
Missouri Mfg. Employment	0.16	0.45	-0.48	0.70

Table 6
AVERAGE ANNUAL GROWTH RATE
SUMMARY OF BASELINE FORECAST

Variable Definition	1986 to 1990	1990 to 1995	1995 to 2000	1986 to 2000
Population	0.52	0.27	0.43	0.40
Labor Force	0.99	0.63	0.88	0.82
Employment	1.08	0.76	1.05	0.96
Real Personal Disposable Income	2.42	2.43	2.49	2.45
Consumer Prices	4.50	5.00	5.20	4.93
Manufacturing Employment	0.18	0.32	-0.02	0.16
Food (20)	0.43	-0.48	-0.67	-0.29
Machinery (35)	1.13	-0.51	0.64	0.37
Electrical Machinery (36)	1.12	0.74	0.30	0.69
Motor Vehicles (371)	-1.76	0.94	0.18	-0.11
Other Transportation (372.9)	-0.84	0.73	-0.11	-0.02

Table 7
SUMMARY OF BASELINE FORECAST

Variable Definition	1986	1990	1995	2000
Population	5081	5187	5258	5273
Labor Force	2531	2633	2717	2839
Employment	2348	2451	2546	2683
Unemployment Rate	6.03	6.02	5.62	5.20
Real Personal Disposable Income	51.23	56.37	63.56	71.88
Consumer Prices	315.3	376.0	479.9	618.4
Manufacturing Employment	422.9	425.9	432.8	432.3
Food (20)	45.9	46.7	45.6	44.1
Machinery (35)	30.4	31.8	31.0	32.0
Electrical Machinery (36)	48.4	50.6	52.5	53.3
Motor Vehicles (371)	33.6	31.3	32.8	36.2
Other Transportation (372.9)	36.3	35.1	36.4	36.2

Table 8
COMPARISON OF ALTERNATIVE FORECASTS
WITH BASELINE FORECAST
(Percentage Difference From Baseline Forecast)

Variable Definition	Alternative Forecast	1990	1995	2000
Population	Low	-1.3	-3.4	-5.5
	High	0.8	2.8	6.7
	Trend	-0.4	-1.2	-0.7
Labor Force	Low	-3.0	-5.9	-8.9
	High	2.4	5.6	8.9
	Trend	-0.1	0.3	1.0
Employment	Low	-3.8	-6.5	-9.8
	High	2.8	6.2	9.5
Trend	0.2	0.5	1.0	
Real Personal Disposable Income	Low	-6.7	-10.6	-14.8
	High	6.0	11.4	16.8
	Trend	1.8	2.7	4.2
Consumer Prices	Low	6.2	10.3	13.2
	High	-5.9	-9.9	-12.5
	Trend	3.1	2.5	-1.6
Manufacturing Employment	Low	-4.5	-6.7	-8.6
	High	4.3	6.2	7.8
	Trend	4.9	6.6	4.2

Table 9

**AVERAGE ANNUAL GROWTH RATE
SUMMARY OF TREND-GROWTH FORECAST**

Variable Definition	1986 to 1990	1990 to 1995	1995 to 2000	1986 to 2000
Population	0.41	0.11	0.55	0.35
Labor Force	0.97	0.71	1.03	0.90
Employment	1.13	0.82	1.16	1.03
Real Personal Disposable Income	2.88	2.61	2.78	2.75
Consumer Prices	5.30	4.42	4.80	4.81
Manufacturing Employment	1.38	0.65	-0.49	0.45
Food (20)	0.38	-0.61	-0.67	-0.35
Machinery (35)	3.21	-0.41	-0.42	0.61
Electrical Machinery (36)	2.73	0.80	-0.47	0.89
Motor Vehicles (371)	-1.06	0.43	0.42	0.00
Other Transportation (372.9)	0.07	0.54	-0.43	0.06

Table 11

**AVERAGE ANNUAL GROWTH RATE
SUMMARY OF HIGH-GROWTH FORECAST**

Variable Definition	1986 to 1990	1990 to 1995	1995 to 2000	1986 to 2000
Population	0.72	0.67	1.19	0.87
Labor Force	1.60	1.24	1.51	1.44
Employment	1.78	1.41	1.69	1.62
Real Personal Disposable Income	3.92	3.45	3.47	3.59
Consumer Prices	2.92	4.10	4.60	3.94
Manufacturing Employment	1.24	0.69	0.28	0.70
Food (20)	0.97	-0.25	-0.47	0.02
Machinery (35)	1.61	-0.37	0.68	0.57
Electrical Machinery (36)	1.91	0.94	0.40	1.02
Motor Vehicles (371)	-0.15	1.34	0.28	0.53
Other Transportation (372.9)	-0.35	0.77	-0.11	0.14

Table 10

**AVERAGE ANNUAL GROWTH RATE
SUMMARY OF LOW-GROWTH FORECAST**

Variable Definition	1986 to 1990	1990 to 1995	1995 to 2000	1986 to 2000
Population	0.20	-0.16	0.00	-0.00
Labor Force	0.22	0.02	0.23	0.15
Employment	0.11	0.19	0.34	0.22
Real Personal Disposable Income	0.66	1.56	1.51	1.23
Consumer Prices	6.09	5.80	5.74	5.86
Manufacturing Employment	-0.98	-0.13	-0.44	-0.48
Food (20)	-0.27	-0.81	-1.03	-0.73
Machinery (35)	0.65	-0.65	0.46	0.12
Electrical Machinery (36)	0.31	0.57	0.12	0.33
Motor Vehicles (371)	-3.37	0.61	-0.26	-0.83
Other Transportation (372.9)	-1.34	0.58	-0.23	-0.26

Table 12

SUMMARY OF TREND-GROWTH FORECAST

Variable Definition	1986	1990	1995	1986
Population	5081	5165	5194	5337
Labor Force	2531	2631	2725	2868
Employment	2348	2456	2558	2710
Unemployment Rate	6.03	5.79	5.51	5.26
Real Personal Disposable Income	51.23	57.40	65.29	74.87
Consumer Prices	315.3	387.6	481.1	608.2
Manufacturing Employment	422.9	446.7	461.4	450.3
Food (20)	45.9	46.6	45.2	43.7
Machinery (35)	30.4	34.5	33.8	33.1
Electrical Machinery (36)	48.4	53.9	56.1	54.8
Motor Vehicles (371)	33.6	32.2	32.9	33.6
Other Transportation (372.9)	36.3	36.4	37.4	36.6

Table 13

SUMMARY OF LOW-GROWTH FORECAST

Variable Definition	1986	1990	1995	2000
Population	5081	5122	5088	5080
Labor Force	2531	2553	2556	2585
Employment	2348	2358	2380	2421
Unemployment Rate	6.03	6.48	5.79	5.36
Real Personal Disposable Income	51.23	52.59	56.80	61.22
Consumer Prices	315.3	399.4	529.5	699.9
Manufacturing Employment	422.9	406.6	404.0	395.1
Food (20)	45.9	45.4	43.6	41.4
Machinery (35)	30.4	31.2	30.2	30.9
Electrical Machinery (36)	48.4	49.0	50.4	50.7
Motor Vehicles (371)	33.6	29.3	30.2	29.9
Other Transportation (372.9)	36.3	34.4	35.4	35.0

Table 14

SUMMARY OF HIGH-GROWTH FORECAST

Variable Definition	1986	1990	1995	2000
Population	5081	5229	5406	5735
Labor Force	2531	2697	2868	3091
Employment	2348	2520	2703	2939
Unemployment Rate	6.03	5.85	5.48	5.20
Real Personal Disposable Income	51.23	59.74	70.79	83.96
Consumer Prices	315.3	353.7	432.4	541.3
Manufacturing Employment	422.9	444.3	459.8	466.2
Food (20)	45.9	47.7	47.1	46.0
Machinery (35)	30.4	32.4	31.8	32.9
Electrical Machinery (36)	48.4	52.2	54.7	55.8
Motor Vehicles (371)	33.6	33.4	35.7	36.2
Other Transportation (372.9)	36.3	35.8	37.2	37.0

Summary*

Missourians face subtle but important changes in the basic framework of their economic lives over the balance of the 20th century. How well they adjust to these changes will in large part determine how far above or below the long-term economic trend Missouri will be by 2000. For example, Missourians face a slowing of population growth and an increasingly older population, two fundamental developments with important implications for the growth of employee earnings and household consumption patterns. They face the growing needs of their manufacturing sectors for funds to replace aging plant and equipment and the conflicting demands of households for income to support expanding consumption. In a larger sense, Missourians also face intensifying competition within the national and international economies.

The three forecasts described in some detail above (excluding the trend projections) portray three contrasting economic futures for Missouri that reflect alternate responses to these and other elements of economic transition. The **baseline forecast** assumes that Missouri will maintain its economic standing among the states by making those long-term investments in people and machines needed to sustain its present level of productiveness. While it is true that developments both in foreign markets and neighboring states can adversely influence economic life in Missouri, the baseline forecast assumes that Missouri will weather temporary economic difficulties by making its labor force more skilled, by maintaining productivity levels through improving the machines that aid human labor, and by sacrificing that amount of current consumption needed to support future growth.

The low growth forecast, however, is equally as likely as the other economic paths which could be

taken. The **low-growth forecast** describes an economic world in which Missourians see significant erosion in their national productivity standing. Moreover, it is a world in which events outside the state aggravate our inability to sustain our share of markets. The economic environment of the late 1980s is such that entrepreneurship languishes, that old industrial equipment is not replaced fast enough to keep its productiveness, and that the skills of Missouri workers do not improve at a pace required to stay level with many other American and foreign workers. When the sharp recession hypothesized in this worse-case scenario strikes in the early 1990s, Missouri businesses have great difficulty weathering declining demand and rising prices. Most importantly, they lack the technological capacity to regain their losses during the recovery of the mid 1990s. Missouri would greet the year 2000 hardly better than it left 1985.

If Missourians exceed the levels of productiveness described in the baseline by devoting even greater current resources to future production and if economic events outside the state support sustained economic expansion, then economic growth as described by the **high-growth forecast** becomes likely. In this possible world of a more expansive economy, machine labor increasingly replaces human labor in those production processes requiring accurate but repetitive activity. Traditionally low paying sectors (such as retail trade and services) experience substantial wage growth as a result of critical capital investment decisions and more skillful workers. Greater productiveness gives Missourians greater command over goods and services and leads many Missourians into new and better paying jobs. But here, as in the baseline forecast, the investment decisions of Missourians are just as important to realizing these predictions as are events in the economic world outside of the state.

*This summary of the Wharton forecasts was prepared by the Commission.

APPENDIX I

MISSOURI SCHOOL ENROLLMENTS

Missouri enrollment patterns are a function of fertility, and fertility has fluctuated widely over the last forty years. Births rose sharply during the baby boom (1946-1964), fell sharply during the baby bust (1965-1976), and have risen again moderately in the era of the baby-boom echo. The successive effects on Missouri elementary schools, high schools and colleges were, and are, largely predictable. Baby boomers swelled elementary enrollments to an all-time high in 1970 and high school enrollments to an all-time high in 1977. College enrollments peaked in the early 1980s, as the last members of the baby boom were in their final years of school. Baby-bust students began to replace baby-boom students in the early 1970s, forcing enrollments down. Elementary enrollments fell steadily until leveling off only just recently. High school enrollments continue to decline. College enrollments appear to be on the verge of prolonged decline for the first time in history.

Future enrollments hinge on the passage of the baby bust and its slightly larger successor, the baby-boom echo (children of baby boomers), through the state's school system. Today's elementary students come primarily from the echo generation, although the last of the baby bust will not leave elementary school until the late 1980s. The echo generation likely will bring modest growth to elementary enrollments for the remainder of the century. The prospect for high school enrollments remains low until the early 1990s, when the last members of the baby bust reach college age and the first members of the baby-boom echo enter high school. The small baby-bust cohort will dominate college enrollments for the next ten years.

Annual enrollments in Missouri public and nonpublic schools since 1979 are presented in Table 1. Total enrollments fell by 5 percent between 1979 and 1984. Losses were heaviest in high school enrollments, which declined by 14 percent. High school students comprise one-fourth of all enrollments. A somewhat surprising trend in the early 1980s was the continued growth in college enrollments despite a sizable decrease in the traditional college-age population (ages

18-24). Figure 1 and Table 2 illustrate. Rising enrollments by persons over age 24 offset declining enrollments by younger students. The proportion of public college students over 24 years of age rose by nearly two percent in the three years following 1981 (to 35 percent).

College enrollments are nevertheless expected to decline in the coming decade. The 18-24 age group is projected to shrink by over 100 thousand persons (19 percent) between 1985 and 1995. If, as is expected, the traditional college-age group continues to comprise a large share of total enrollments, total enrollments should decline accordingly. Little more than one in three people aged 18 to 24 attend college, yet the group represents 65 percent of college students. The National Center for Education Statistics recently projected a 6 percent drop in national college enrollments between 1983 and 1993. Many demographers incorrectly forecasted the turn-around to occur before 1983. The long-predicted decline in college enrollments finally materialized in 1984.

A significant demographic trend in college enrollments is the increasing participation by women. Fifty-one percent of Missouri's college students were women in 1984. In comparison, women accounted for little more than a third of college enrollments in 1950. National projections indicate that women will hold this majority, largely through higher attendance by older women. Two-thirds of students 35 years of age and over are women.

Elementary and secondary enrollments correspond more closely to changes in their respective age groups (ages 5-13 and 14-17) due to higher attendance rates. Therefore, projected populations for these age groups provide a clearer picture of what elementary and secondary enrollments may be. Figure 2 and Table 3 present historic and projected changes in these age groups. After sharp decline, the drop in elementary enrollments appears to have bottomed out. Modest growth is expected. The estimated 633 thousand elementary-school-age children in 1985 were nearly 200 thousand (23 percent) fewer than their counterparts in 1970. The 5-13 age group is projected to grow by 9 percent by 1995. The

TABLE 1

MISSOURI PUBLIC AND NONPUBLIC SCHOOL ENROLLMENTS: 1979-1984
(Fall Enrollments in Thousands. Sums may vary due to rounding.)

GRADE	1984				1983				1982			
	K-8	9-12	COLL	ALL	K-8	9-12	COLL	ALL	K-8	9-12	COLL	ALL
PUBLIC	545	249	170	964	546	249	177	973	547	256	174	977
NONPUBLIC	87	30	71	188	89	30	71	190	89	31	70	190
TOTAL	632	279	241	1,152	635	280	248	1,163	636	287	244	1,167
% NONPUB	13.8	10.7	29.5	16.3	14.0	10.8	28.6	16.4	14.0	10.9	28.7	16.3

GRADE	1981				1980				1979			
	K-8	9-12	COLL	ALL	K-8	9-12	COLL	ALL	K-8	9-12	COLL	ALL
PUBLIC	553	266	173	992	567	278	165	1,010	580	294	153	1,026
NONPUBLIC	89	32	71	192	88	32	69	189	88	32	69	189
TOTAL	642	298	244	1,184	655	309	234	1,199	667	325	222	1,215
% NONPUB	13.9	10.7	29.1	16.2	13.4	10.3	29.5	15.8	13.1	9.8	31.1	15.5

Sources: Missouri DESE and National Center for Education Statistics

FIGURE 1

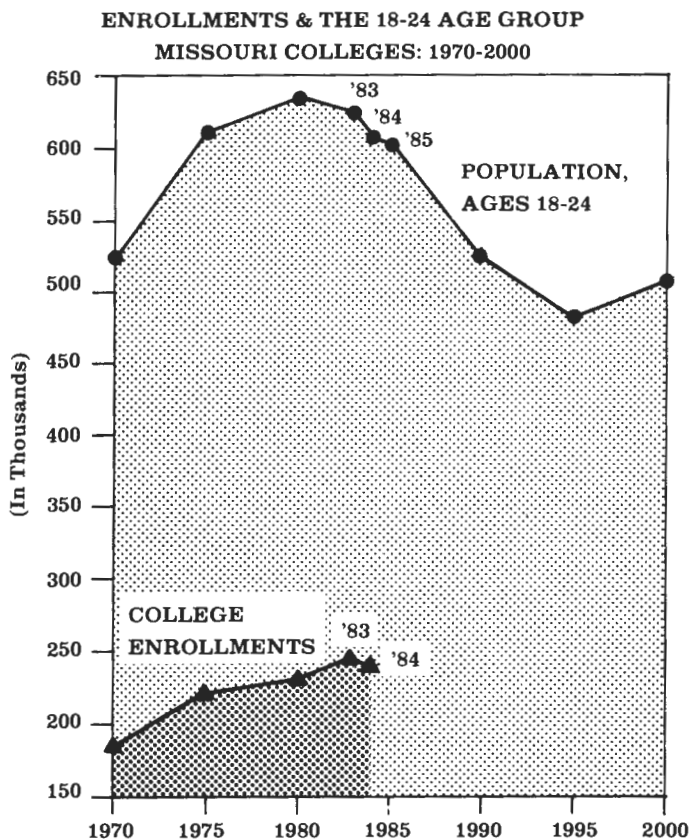
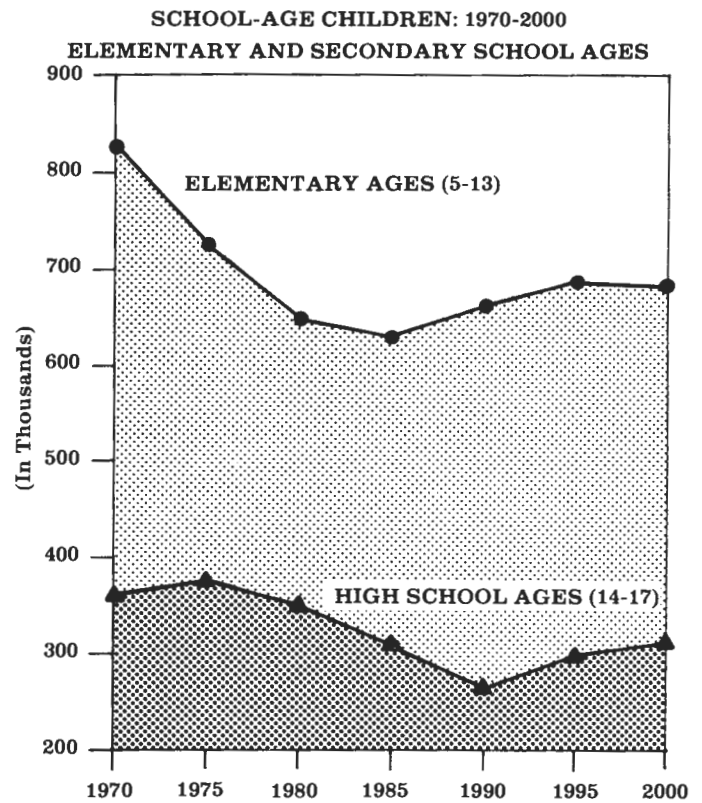


FIGURE 2



decline in high school enrollments probably will not bottom out until around 1990, when there will be an estimated 274 thousand 14-17 year-olds. This would be a drop of over 100 thousand persons (28 percent) since 1975. With the influx of baby-boom-echo students, high school enrollments should rise again in the 1990s. The high school age group is expected to grow by 12 percent between 1990 and 2000.

The relationship between public and private school enrollments is presented in Table 1 and Figure 3. There has been little change since 1970 in the proportion of Missouri students who attend private schools. This is true for all levels of instruction. Private elementary enrollments rose from 13.2 percent in 1970 to 13.8 percent in 1984. Private secondary enrollments fell from 11.7 percent in 1970 to 10.7 percent in 1984. Private college enrollments rose from 27.7 percent in 1970 to 29.5 percent in 1984.

TABLE 2

**COLLEGE ENROLLMENTS AND THE
TRADITIONAL COLLEGE-AGE POPULATION:
1970-2000
(In Thousands)**

	1970	1975	1980	1983	1984	1985	1990	1995	2000
PERSONS (Ages 18-24)	522	611	636	624	611	603	526	488	505
ENROLL- MENTS	184	223	234	248	241				

Sources: U.S. Bureau of the Census, National Center for Education Statistics and Missouri Division of Budget and Planning

TABLE 3

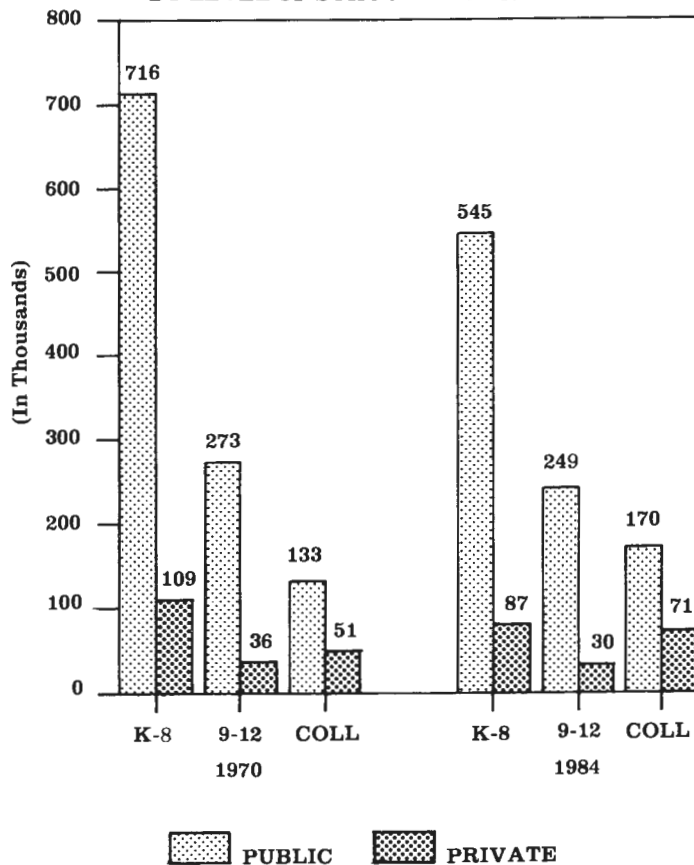
**SCHOOL-AGE CHILDREN: 1970-2000
(In Thousands)**

	1970	1975	1980	1985	1990	1995	2000
ELEMENTARY (Ages 5-13)	827	725	658	633	668	692	688
HIGH SCHOOL (Ages 14-17)	356	378	350	306	274	301	308

Sources: U.S. Bureau of the Census, Missouri Department of Elementary and Secondary Education and Division of Budget and Planning

FIGURE 3

**PUBLIC AND PRIVATE SCHOOL ENROLLMENTS
BY LEVEL OF SCHOOL: 1970 AND 1984**



APPENDIX II

TABLE 1
MISSOURI STATE MODEL
MAJOR ECONOMIC INDICATORS: BASELINE MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total Employment % SAAR	2348.3	2400.0	2437.6	2463.8	2450.9	2475.3	2505.6	2525.2	2544.4	2546.9	2548.3	2571.2	2619.5	2653.0	2683.0
Manufacturing % SAAR	422.9	431.5	436.9	436.9	425.9	439.7	434.9	436.5	433.4	432.8	426.8	419.6	433.7	434.8	432.3
Nonmanufacturing % SAAR	1817.0	1862.0	1897.5	1924.5	1914.9	1939.7	1970.8	1990.2	2010.2	2012.0	2013.3	2036.1	2081.9	2114.0	2142.4
State & Local Gov % SAAR	259.9	263.9	264.9	266.5	266.5	267.5	268.6	270.7	272.7	275.7	278.6	281.0	283.9	286.8	289.8
Federal Gov, Civ % SAAR	71.0	73.4	75.1	73.4	71.7	70.5	69.4	68.4	67.6	67.0	66.6	66.1	65.6	65.2	64.8
Federal Gov, Mil % SAAR	52.3	52.5	52.7	52.8	52.9	53.0	53.2	53.3	53.5	53.6	53.7	53.9	54.0	54.2	54.4
Household Employment % SAAR	2378.4	2427.0	2462.1	2486.8	2474.7	2497.5	2525.9	2544.3	2562.2	2564.6	2565.9	2587.4	2632.5	2663.8	2691.8
Labor Force % SAAR	2530.8	2577.8	2612.9	2634.6	2633.1	2652.6	2675.6	2693.7	2710.4	2717.1	2720.1	2741.6	2781.8	2811.5	2839.4
Unemployment Rate % SAAR	6.0	5.9	5.8	5.6	6.0	5.9	5.6	5.6	5.5	5.6	5.7	5.6	5.4	5.3	5.2
Population % SAAR	5081.2	5124.6	5159.6	5169.8	5187.3	5200.6	5209.6	5231.0	5245.8	5257.8	5261.0	5280.8	5310.7	5341.0	5373.1
Number of Households % SAAR	1896.6	1926.4	1954.5	1971.1	1983.2	2002.2	2018.4	2038.3	2054.5	2070.4	2083.7	2100.2	2123.6	2145.8	2167.3
Disposable Income % SAAR	51.2	53.6	54.6	55.3	56.4	57.8	59.2	60.7	62.1	63.6	65.5	66.5	68.5	70.1	71.9
Per Capita % SAAR	10081.6	10468.6	10582.2	10702.9	10866.7	11119.7	11362.2	11602.4	11831.9	12088.5	12443.9	12585.6	12903.1	13123.7	13376.8
Consumer Price Index % SAAR	315.3	317.6	335.1	355.5	376.0	394.6	412.4	432.2	453.8	479.9	507.5	537.6	562.9	588.3	618.4

APPENDIX II

TABLE 2
MISSOURI STATE MODEL
ESTABLISHMENT EMPLOYMENT: BASELINE MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total Employment % SAAR	2348.3	2400.0	2437.6	2463.8	2450.9	2475.3	2505.6	2525.2	2544.4	2546.9	2548.3	2571.2	2619.5	2653.0	2683.0
Agriculture % SAAR	148.2	148.2	147.4	146.7	144.8	144.6	143.5	142.6	140.4	138.5	136.1	134.1	134.0	132.8	131.6
Mining % SAAR	5.9	5.8	5.7	5.5	5.3	5.2	5.0	4.9	4.8	4.7	4.6	4.6	4.6	4.7	4.7
Contract Construction % SAAR	103.9	105.4	108.6	108.7	106.7	115.0	116.0	116.6	116.8	118.1	116.3	117.3	118.7	120.2	121.7
Manufacturing % SAAR	422.9	431.5	436.9	436.9	425.9	439.7	434.9	436.5	433.4	432.8	426.8	419.6	433.7	434.8	432.3
Trans, Comm, Util % SAAR	143.6	155.1	159.0	159.7	152.2	154.8	153.4	153.6	153.9	154.4	156.0	153.5	157.0	158.2	158.7
Whsale & Retl Trade % SAAR	532.4	543.4	554.6	564.7	569.5	567.1	584.6	591.9	599.3	599.2	603.3	616.8	628.7	641.9	655.0
Wholesale Trade % SAAR	129.7	130.6	134.9	138.6	137.9	134.5	138.3	139.0	139.5	137.4	136.8	140.0	142.3	144.5	146.5
Retail Trade % SAAR	402.8	412.8	419.6	426.1	431.6	432.6	446.3	453.0	459.8	461.8	466.5	476.7	486.4	497.3	508.5
Fin, Ins, & Real Est % SAAR	125.0	129.4	131.7	134.5	136.3	138.7	140.6	142.5	144.3	145.9	146.6	147.9	149.3	150.9	152.5
Regulated Indus % SAAR	87.3	93.4	96.5	97.3	92.9	95.3	94.1	94.2	94.0	94.2	94.6	93.5	95.6	96.0	96.0
Elect, Gas, Sanitary % SAAR	22.2	22.9	23.0	22.9	22.7	22.9	22.8	22.9	23.1	23.3	23.3	23.2	23.4	23.5	23.6
Business Services % SAAR	143.8	150.1	157.9	167.7	168.8	168.0	178.7	183.6	192.4	191.5	192.1	201.4	208.4	215.6	223.4
Health Services % SAAR	178.7	181.1	182.2	185.3	191.4	194.5	201.7	206.6	212.6	215.3	218.4	224.2	229.1	233.9	238.8
Educational Services % SAAR	43.5	44.8	46.4	47.7	47.1	47.1	47.2	47.2	47.2	47.3	47.3	47.3	47.3	47.4	47.4
Other Services % SAAR	117.2	115.6	114.3	113.6	111.7	109.4	108.6	106.8	105.3	102.7	101.8	103.5	105.0	106.4	107.8

APPENDIX II

TABLE 3
MISSOURI STATE MODEL
PERSONAL INCOME: BASELINE MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Labor & Proprietors Inc % SAAR	52.3	55.6	59.5	63.7	66.9	72.2	77.1	83.1	89.3	96.3	104.0	111.9	122.0	130.9	140.6
Residence Adjustment % SAAR	-2.3	-2.3	-2.4	-2.6	-2.6	-2.7	-2.8	-2.9	-3.0	-3.1	-3.2	-3.4	-3.7	-3.9	-4.1
Personal Contributions for Social Insurance % SAAR	3.3	3.5	3.8	4.0	4.4	4.8	5.2	5.6	6.1	6.7	7.4	8.2	9.1	9.9	10.8
Div, Int, & Rent % SAAR	12.7	13.0	13.7	14.9	17.2	18.7	20.3	21.9	23.6	25.9	29.2	31.7	33.7	35.8	39.2
Transfer Payments % SAAR	10.2	10.9	11.2	12.0	13.1	13.6	14.3	15.1	16.1	17.2	18.5	19.9	21.0	22.3	23.9
Disposable Personal Inc. % SAAR	59.8	63.4	68.0	73.1	78.7	84.4	90.3	97.0	104.2	112.7	122.5	132.0	142.4	152.1	163.8
Disp Pers Inc Per Capita % SAAR	11770.7	12371.2	13173.7	14146.6	15163.0	16237.6	17332.3	18549.2	19865.5	21431.4	23291.3	24994.6	26811.3	28479.5	30491.0

APPENDIX II

TABLE 4
MISSOURI STATE MODEL
MAJOR ECONOMIC INDICATORS: TREND MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total Employment % SAAR	2348.3	2401.2	2444.7	2468.9	2455.6	2470.3	2501.7	2523.9	2547.7	2557.9	2568.1	2604.0	2646.1	2680.0	2709.9
Manufacturing % SAAR	422.9	435.2	444.2	447.8	446.7	462.5	459.9	462.4	461.3	461.4	456.4	451.4	460.1	455.5	450.3
Nonmanufacturing % SAAR	1817.0	1863.6	1901.0	1919.7	1908.8	1926.6	1959.1	1982.2	2007.7	2017.7	2027.4	2062.9	2104.0	2135.8	2164.6
State & Local Gov % SAAR	259.9	261.4	264.7	269.0	269.5	270.2	271.5	273.5	275.3	277.8	280.3	283.5	286.5	289.8	293.1
Federal Gov, Civ % SAAR	71.0	75.2	78.4	78.3	76.8	75.8	74.8	73.8	72.8	72.1	71.5	70.8	70.1	69.5	68.8
Federal Gov, Mil % SAAR	52.3	52.5	52.7	52.8	2.9	53.0	53.2	53.3	53.5	53.6	53.7	53.9	54.0	54.2	54.4
Household Employment % SAAR	2378.4	2428.0	2468.9	2491.5	2479.0	2492.9	2522.3	2543.1	2565.4	2574.9	2584.4	2618.0	2657.5	2689.1	2717.0
Labor Force % SAAR	2530.8	2580.5	2616.7	2636.4	2631.2	2642.1	2667.0	2688.5	2710.4	2724.9	2738.4	2772.7	2810.9	2842.2	2867.5
Unemployment Rate % SAAR	6.0	5.9	5.7	5.5	5.8	5.7	5.4	5.4	5.4	5.5	5.6	5.6	5.5	5.4	5.3
Population % SAAR	5081.2	5142.3	5169.0	5171.0	5165.1	5151.0	5149.5	5165.4	5177.7	5193.6	5210.2	5239.9	5269.3	5301.8	5337.1
Number of Households % SAAR	1896.6	1925.8	1950.7	1964.2	1967.	1975.7	1987.7	2005.3	2020.3	2037.5	2055.9	2076.2	2099.2	2122.1	2144.8
Disposable Income % SAAR	51.2	53.4	54.5	55.6	57.4	58.7	60.7	62.6	64.6	65.3	68.1	69.9	71.6	73.2	74.9
Per Capita % SAAR	10081.7	10378.2	10536.2	10745.1	11113.8	11404.1	11780.5	12128.7	12473.5	12571.4	13061.0	13340.0	13585.4	13815.1	14028.3
Consumer Price Index % SAAR	315.3	321.1	341.5	364.9	387.6	406.3	420.3	437.4	455.7	481.1	506.8	533.6	557.7	580.7	608.2

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TABLE 5
MISSOURI STATE MODEL
EMPLOYMENT BUSINESS/MANUFACTURING DETAIL: TREND MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total Manufacturing % SAAR	422.9	435.2	444.2	447.8	446.7	462.5	459.9	462.4	461.3	461.4	456.4	451.4	460.1	455.5	450.3
Food & Kindred Prod % SAAR	45.9	46.5	46.2	46.4	46.6	46.7	46.3	45.8	45.4	45.2	44.8	44.3	44.3	44.0	43.7
Textiles % SAAR	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Apparel % SAAR	24.5	25.6	25.5	25.2	25.2	26.1	26.2	26.4	26.4	26.7	26.7	26.2	27.5	26.5	25.8
Lumber & Wood % SAAR	10.1	10.0	10.3	10.1	9.5	10.9	11.2	11.9	12.5	12.7	12.6	11.2	12.0	11.8	11.5
Furniture % SAAR	10.4	10.5	10.6	10.8	10.8	11.4	11.4	11.5	11.4	11.5	11.4	11.5	11.9	11.9	11.8
Paper Products % SAAR	13.3	13.7	14.0	14.2	14.2	14.6	14.6	14.7	14.6	14.8	14.7	14.3	14.3	14.1	13.8
Printing & Publishing % SAAR	40.8	41.7	42.5	43.0	43.2	44.3	44.3	44.6	45.0	45.3	45.5	45.9	46.9	47.2	47.4
Chemicals % SAAR	28.6	30.2	30.5	30.6	30.1	31.5	31.6	32.2	32.5	32.9	32.9	32.3	33.1	33.0	32.6
Petroleum Products % SAAR	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5
Rubber & Plastics % SAAR	12.7	13.2	13.5	14.0	14.7	14.8	14.7	14.9	14.9	14.9	14.8	14.8	14.9	14.7	14.4
Leather % SAAR	16.8	17.8	18.0	17.9	17.5	17.2	17.1	16.8	16.6	16.6	16.4	15.6	15.9	15.7	15.5
Stone, Clay, & Glass % SAAR	11.6	12.1	12.6	12.7	12.4	13.6	13.5	13.9	14.2	14.4	14.2	14.1	14.5	14.2	13.8
Primary Metals % SAAR	12.0	12.1	12.6	12.9	12.7	13.2	13.1	13.1	13.4	13.4	13.1	12.0	11.3	10.2	9.6
Fabricated Metals % SAAR	28.0	28.5	28.9	29.3	30.1	31.0	29.8	30.3	29.7	29.3	28.5	28.3	29.7	29.4	28.9

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TABLE 6
MISSOURI STATE MODEL
PERSONAL INCOME: TREND MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Labor & Proprietors Inc % SAAR	52.3	55.8	60.5	65.7	70.7	76.0	81.2	87.5	94.0	100.4	109.0	118.0	127.4	136.6	146.8
Residence Adjustment % SAAR	-2.3	-2.3	-2.5	-2.6	-2.7	-2.8	-2.9	-3.0	-3.1	-3.1	-3.3	-3.5	-3.8	-4.0	-4.2
Personal Contributions for Social Insurance % SAAR	3.3	3.6	3.9	4.2	4.6	5.0	5.5	6.0	6.6	7.1	7.8	8.7	9.6	10.4	11.3
Div, Int, & Rent % SAAR	12.7	13.2	14.1	15.5	18.4	19.8	21.5	23.3	25.2	26.5	30.3	33.2	34.9	36.5	38.7
Transfer Payments % SAAR	10.2	10.9	11.3	12.1	13.1	13.5	14.0	14.7	15.4	16.6	17.8	19.0	20.1	21.3	22.6
Disposable Personal Inc. % SAAR	59.8	63.8	69.1	75.4	82.5	88.2	94.1	101.2	108.6	115.7	126.7	137.0	146.6	156.0	166.9
Disp Pers Inc Per Capita % SAAR	11770.7	12410.1	13371.3	14579.9	15971.1	17131.5	18282.9	19584.6	20978.5	22278.5	24322.4	26150.4	27819.5	29427.5	31276.2

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TABLE 7
MISSOURI STATE MODEL
MAJOR ECONOMIC INDICATORS: LOWLINE MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total Employment % SAAR	2348.3	2369.8	2389.2	2396.9	2358.2	2365.8	2377.1	2383.2	2387.3	2380.4	2370.5	2374.2	2397.6	2412.3	2421.5
Manufacturing % SAAR	422.9	418.5	421.9	420.1	406.6	418.2	411.4	411.3	406.2	404.0	396.5	387.6	399.5	399.1	395.1
Nonmanufacturing % SAAR	1817.0	1835.5	1855.5	1866.9	1835.2	1846.2	1860.8	1868.8	1875.9	1870.1	1861.9	1867.8	1891.9	1908.0	1918.5
State & Local Gov % SAAR	259.9	261.2	260.6	260.2	257.8	256.2	255.2	255.3	255.5	256.7	258.0	258.5	258.7	259.0	259.7
Federal Gov, Civ % SAAR	71.0	72.5	73.6	71.5	69.4	67.7	66.2	64.7	63.4	62.4	61.5	60.5	59.5	58.7	57.8
Federal Gov, Mil % SAAR	52.3	52.5	52.7	52.8	52.9	53.0	53.2	53.3	53.5	53.6	53.7	53.9	54.0	54.2	54.4
Household Employment % SAAR	2378.4	2398.5	2416.7	2525.0	2387.6	2394.8	2405.4	2411.1	2414.9	2408.5	2399.1	2402.6	2424.7	2438.4	2447.1
Labor Force % SAAR	2530.8	2556.0	2572.3	2575.9	2552.8	2552.0	2555.7	2558.8	2560.3	2556.4	2548.2	2552.5	2568.3	2577.8	2585.4
Unemployment Rate % SAAR	6.0	6.2	6.1	5.9	6.5	6.2	5.9	5.8	5.7	5.8	5.9	5.9	5.6	5.4	5.4
Population % SAAR	5081.2	5124.7	5146.1	5135.1	5121.6	5102.1	5086.5	5086.7	5082.6	5079.7	5071.4	5074.6	5072.7	5073.5	5079.9
Number of Households % SAAR	1896.6	1916.2	1937.9	1945.5	1945.0	1950.6	1956.5	1967.3	1975.3	1984.5	1992.4	2001.6	2011.4	2020.9	2031.2
Disposable Income % SAAR	51.2	51.9	52.2	52.3	52.6	53.4	54.1	55.0	55.8	56.8	58.1	58.4	59.5	60.3	51.2
Per Capita % SAAR	10081.6	10129.9	10144.5	10194.0	10267.3	10467.4	10632.6	10815.6	10974.4	11174.7	11449.0	11506.0	11726.2	11880.8	12052.2
Consumer Price Index % SAAR	315.3	326.1	348.7	373.8	399.4	423.3	446.3	471.0	497.9	529.5	562.5	599.1	631.1	663.2	699.9

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TABLE 8
MISSOURI STATE MODEL
EMPLOYMENT BUSINESS/MANUFACTURING DETAIL: LOWLINE MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total Manufacturing % SAAR	422.9	418.5	421.9	420.1	406.6	418.2	411.4	411.3	406.2	404.0	396.5	387.6	399.5	399.1	395.1
Food & Kindred Prod % SAAR	45.9	45.9	45.4	45.5	45.4	45.6	45.0	44.5	43.9	43.6	43.0	42.4	42.3	41.8	41.4
Textiles % SAAR	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Apparel % SAAR	24.5	24.3	23.6	22.7	21.5	21.6	21.0	20.7	20.2	20.0	19.6	18.4	19.2	18.3	17.4
Lumber & Wood % SAAR	10.1	8.5	8.3	7.8	6.4	7.3	7.2	7.4	7.4	7.2	7.0	5.4	6.3	6.7	6.8
Furniture % SAAR	10.4	10.1	10.1	10.0	9.6	10.1	9.9	9.9	9.7	9.7	9.6	9.3	9.8	9.9	9.9
Paper Products % SAAR	13.3	13.3	13.4	13.5	13.2	13.4	13.3	13.3	13.1	13.1	12.9	12.5	12.7	12.5	12.3
Printing & Publishing % SAAR	40.8	41.0	41.5	41.7	41.6	42.2	41.8	41.7	41.7	41.7	41.5	41.5	42.2	42.3	42.3
Chemicals % SAAR	28.6	29.2	29.3	29.2	28.2	29.3	29.1	29.4	29.5	29.9	29.8	29.0	29.9	29.9	29.6
Petroleum Products % SAAR	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.3
Rubber & Plastics % SAAR	12.7	12.8	12.9	13.2	13.5	13.4	13.1	13.1	12.9	12.7	12.5	12.3	12.5	12.3	12.0
Leather % SAAR	16.8	17.4	17.2	16.8	15.7	15.2	14.6	14.1	13.7	13.4	12.9	11.7	12.4	12.1	11.7
Stone, Clay, & Glass % SAAR	11.6	11.3	11.	11.3	10.1	11.3	11.0	11.0	10.9	10.9	10.7	10.2	11.0	11.0	10.7
Primary Metals % SAAR	12.0	11.5	11.6	11.6	10.7	10.6	10.1	10.0	9.8	9.6	9.3	8.7	8.8	8.7	8.4
Fabricated Metals % SAAR	28.0	26.6	26.6	26.7	26.1	26.9	25.7	26.3	25.5	24.9	24.0	23.4	25.2	25.7	25.5

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TABLE 9
MISSOURI STATE MODEL
PERSONAL INCOME: LOWLINE MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Labor & Proprietors Inc % SAAR	52.3	55.0	58.8	62.7	65.5	70.5	75.1	80.7	86.5	93.0	100.0	107.0	115.8	123.4	131.6
Residence Adjustment % SAAR	-2.3	-2.3	-2.4	-2.5	-2.6	-2.7	-2.8	-2.8	-2.9	-3.0	-3.2	-3.4	-3.6	-3.8	-4.0
Personal Contributions for Social Insurance % SAAR	3.3	3.5	3.8	4.0	4.3	4.7	5.0	5.5	5.9	6.5	7.1	7.8	8.6	9.3	10.0
Div, Int, & Rent % SAAR	12.7	12.9	13.7	14.9	17.2	18.8	20.3	21.9	23.6	26.0	29.3	31.7	33.7	35.8	39.1
Transfer Payments % SAAR	10.2	11.0	11.3	12.2	13.4	13.9	14.7	15.5	16.6	17.8	19.1	20.6	21.7	23.1	24.6
Disposable Personal Inc. % SAAR	59.8	62.9	67.5	72.7	77.8	83.5	89.1	95.7	102.6	110.8	120.2	128.9	138.3	147.1	157.6
Disp Pers Inc Per Capita % SAAR	11770.7	12279.9	13125.7	14149.5	15196.2	16370.8	17520.2	18810.3	20178.4	21811.8	23705.1	25404.7	27259.3	28999.2	31025.1

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TABLE 10
MISSOURI STATE MODEL
MAJOR ECONOMIC INDICATORS: HIGHLINE MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total Employment % SAAR	2348.3	2433.9	2489.6	2528.8	2519.5	2556.1	2601.9	2642.1	2684.8	2703.1	2722.1	2765.9	2830.3	2885.5	2938.8
Manufacturing % SAAR	422.9	444.6	452.1	453.6	444.3	459.9	456.8	460.1	459.1	459.8	454.8	449.1	465.0	467.5	466.2
Nonmanufacturing % SAAR	1817.0	1891.7	1942.7	1980.0	1972.6	2008.2	2053.1	2090.7	2131.3	2145.6	2162.0	2202.8	2262.2	2313.0	2361.4
State & Local Gov % SAAR	259.9	266.9	269.7	273.0	274.2	276.1	278.8	283.0	287.7	293.5	298.6	303.7	309.0	314.4	320.4
Federal Gov, Civ % SAAR	71.0	74.4	76.5	75.3	74.0	73.3	72.6	72.0	71.6	71.5	71.5	71.4	71.3	71.3	71.4
Federal Gov, Mil % SAAR	52.3	52.5	52.7	52.8	52.9	53.0	53.2	53.3	53.5	53.6	53.7	53.9	54.0	54.2	54.4
Household Employment % SAAR	2378.4	2458.8	2511.0	2547.6	2538.9	2573.2	2616.1	2653.7	2693.6	2710.6	2728.4	2769.3	2829.2	2880.7	2930.3
Labor Force % SAAR	2530.8	2605.2	2657.7	2693.4	2696.6	2726.3	2765.5	2802.1	2843.3	2867.8	2888.0	2931.1	2989.0	3039.6	3090.9
Unemployment Rate % SAAR	6.0	5.6	5.5	5.4	5.8	5.6	5.4	5.3	5.3	5.5	5.5	5.5	5.4	5.2	5.2
Population % SAAR	5081.2	5148.5	5193.4	5213.5	5228.9	5237.1	5252.5	5290.1	5348.0	5406.1	5443.0	5509.7	5580.1	5652.5	5735.2
Number of Households % SAAR	1896.6	1937.6	1973.9	1998.8	2014.3	2035.5	2058.4	2088.7	2117.6	2147.0	2168.6	2198.4	2232.2	2265.0	2300.0
Disposable Income % SAAR	51.2	55.4	57.1	58.4	59.7	61.8	63.9	66.2	68.6	70.8	73.6	75.4	78.4	81.1	84.0
Per Capita % SAAR	10081.6	10764.6	10995.3	11192.8	11424.8	11804.8	12164.5	12522.4	12822.8	13095.2	13518.0	13688.5	14054.0	14347.4	14639.2
Consumer Price Index % SAAR	315.3	309.1	321.6	337.5	353.7	367.5	380.6	395.4	411.6	432.4	454.5	478.7	498.1	517.1	541.3

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TABLE 11
MISSOURI STATE MODEL
EMPLOYMENT BUSINESS/MANUFACTURING DETAIL: HIGHLINE MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total Manufacturing % SAAR	422.9	444.6	452.1	453.6	444.3	459.9	456.8	460.1	459.1	459.8	454.8	449.1	465.0	467.5	466.2
Food & Kindred Prod % SAAR	45.9	47.3	47.2	47.5	47.7	48.1	47.9	47.6	47.4	47.1	46.6	46.2	46.4	46.2	46.0
Textiles % SAAR	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Apparel % SAAR	24.5	26.7	26.9	26.5	25.8	26.7	26.6	26.9	27.1	27.3	27.3	26.5	28.4	28.0	27.6
Lumber & Wood % SAAR	10.1	11.5	11.9	11.6	10.4	11.4	11.4	11.7	11.9	12.0	11.9	10.5	11.8	12.5	12.6
Furniture % SAAR	10.4	10.7	10.7	10.6	10.3	10.9	10.8	10.8	10.8	10.8	10.8	10.6	11.1	11.3	11.3
Paper Products % SAAR	13.3	14.1	14.4	14.6	14.4	14.8	14.7	14.8	14.8	14.8	14.7	14.4	14.7	14.6	14.5
Printing & Publishing % SAAR	40.8	42.4	43.4	44.0	44.3	45.5	45.5	45.8	46.3	46.8	47.1	47.4	48.6	49.1	49.5
Chemicals % SAAR	28.6	31.0	31.6	31.8	31.2	32.7	32.8	33.4	33.8	34.5	34.6	34.1	35.3	35.6	35.7
Petroleum Products % SAAR	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Rubber & Plastics % SAAR	12.7	13.4	13.7	14.1	14.6	14.7	14.5	14.6	14.6	14.5	14.4	14.3	14.6	14.6	14.3
Leather % SAAR	16.8	18.2	18.4	18.2	17.2	16.9	16.5	16.2	16.0	15.7	15.3	14.2	15.2	15.1	14.8
Stone, Clay, & Glass % SAAR	11.6	12.5	13.0	12.9	11.9	13.2	13.0	13.3	13.3	13.5	13.5	13.2	14.1	14.2	14.1
Primary Metals % SAAR	12.0	11.7	11.7	11.8	10.9	11.0	10.7	10.8	10.8	10.9	10.7	10.2	10.5	10.5	10.4
Fabricated Metals % SAAR	28.0	29.3	29.1	29.3	29.1	30.1	29.1	20.7	29.1	28.7	28.0	27.4	29.2	29.6	29.4

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TABLE 12
MISSOURI STATE MODEL
PERSONAL INCOME: HIGHLINE MODEL

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Labor & Proprietors Inc % SAAR	52.3	56.2	60.2	64.5	67.6	72.9	78.0	84.4	91.1	98.4	106.6	115.2	126.0	135.9	147.0
Residence Adjustment % SAAR	-2.3	-2.3	-2.5	-2.6	-2.6	-2.7	-2.8	-2.9	-3.0	-3.1	-3.2	-3.5	-3.7	-3.9	-4.2
Personal Contributions for Social Insurance % SAAR	3.3	3.6	3.9	4.1	4.4	4.8	5.2	5.7	6.3	6.9	7.6	8.	9.5	10.3	11.3
Div. Int. & Rent % SAAR	12.7	13.1	13.7	14.7	16.9	18.4	19.9	21.5	23.3	25.7	29.1	31.8	33.9	36.2	39.8
Transfer Payments % SAAR	10.2	10.8	11.0	11.7	12.7	13.1	13.7	14.5	15.4	16.4	17.7	19.1	20.1	21.3	22.8
Disposable Personal Inc. % SAAR	59.8	63.8	68.3	73.3	78.6	84.2	90.1	97.1	104.7	113.4	123.7	133.7	144.6	144.1	168.0
Disp Pers Inc Per Capita % SAAR	11770.7	12393.7	13154.0	14068.0	15024.0	16083.9	17157.7	18357.2	19579.5	20969.9	22717.6	24272.4	25916.3	27443.7	29293.9

APPENDIX III

COMMISSIONERS' BIOGRAPHIES

Gracia Yancey Backer

Gracia Yancey Backer is serving her third term in the Missouri House of Representatives. She is a member of the following House Committees: mental health appropriations; (vice-chair) motor vehicle and traffic regulations; (vice-chair) correctional institutions; budget; and the joint committee on correctional institutions and problems. Prior to her election in 1982, Backer served as Executive Secretary to the Missouri League of Nursing Home Administrators, Inc. From 1977 until 1981, she was Executive Secretary of the Missouri Highway Reciprocity Commission, and she has previously served as an administrative assistant to State Senators Don Manford and Jack Gann.

Francis "Bud" Barnes, J.D.

Barnes was born in 1918 in St. Louis. He attended the University of Missouri-Columbia and Washington University receiving both his B.A. and his L.L.B. He served in the U.S. Army during World War II. Barnes, a lawyer, was an Assistant City Counselor for St. Louis City, the attorney for a container corporation, and senior vice-president of a manufacturing corporation. He is a former president of the Missouri State Historical Society and a trustee of the Clifford Willard Gaylord Foundation. He received the *St. Louis Globe Democrat* Meritorious Service Award for the 79th and 82nd General Assemblies. He was elected to the House in 1976 and continuously re-elected since that time.

Hector Barreto

Barreto was born in Mexico City, Mexico. He was raised and educated in Guadalajara, Jalisco, Mexico. He moved to the United States in 1958 and has been active in the business and civic communities. He served as the President of both Camino Real General Construction and Sol International, Inc. He is also the owner of El Patio Tile Company. Currently, Barreto is serving as the President of the U.S. Hispanic Chamber of Commerce and Chairman of the National Republican

Hispanic Assembly. He is the Past President of the Kansas City Hispanic Chamber of Commerce, the National Economic Development Association, and the Westside Local Development Company in Kansas City. Barreto served on President Reagan's transition team from 1981 to 1982 and was a delegate to the White House Conference on Small Business in 1980. Mr. Barreto also served on the boards of the Heart of America United Way, the Ronnie Millsap Foundation, and the Kansas City Area Private Industry Council.

Jay Barton, Ph.D.

Jay Barton, a University of Missouri graduate, was named Vice-President for Academic Affairs of the University of Missouri system in February of 1985. He earned Bachelor of Science, Master of Science, and Doctor of Philosophy degrees in zoology from the University of Missouri. He served with the U.S. Field Artillery in the Pacific from 1943 to 1946. Before taking up his administrative duties at the University of Missouri, Barton served as President of the University of Alaska system for five years and as Provost and Vice-President of Academic Affairs at West Virginia University for 11 years. Barton was awarded the National Science Foundation Fellowship for research at the Biological Institute of the Carlsberg Foundation in Denmark and a Fulbright Senior Scientist Travel Award to lecture at universities in Italy. He participated in a National Science Foundation-sponsored science development program in India and served on the Commission of Undergraduate Education in the Biological Sciences, a NSF-supported curriculum project. For a decade, he served on the Executive Committee and as Chairman of the Board of BSCS, Inc.

Muriel Battle, Ph.D.

Dr. Battle is currently the principal of West Junior High School in Columbia, Missouri. She has served as a teacher, an elementary school principal, an assistant principal, and a department chairperson in elementary schools. She is a member of a number of professional organizations including the International Reading Association, the Missouri Association of Secondary School Principals, the National Association of

Secondary Schools, Phi Delta Kappa, and the Association for Supervision and Curriculum Development. Battle currently chairs the Board of Curators at Lincoln University. In 1985, she served as a member of the North Central Evaluation Team in the Panama Canal Zone.

Lance G. Beshore, Ph.D.

Beshore is the Staff Vice-President for Public Affairs and Government Relations for Leggett and Platt, Inc. He received his Ph.D. from the University of Colorado, his M.A. from Penn State University, and his B.A. from Westminster College. He has served as an instructor in political science at both the University of Colorado and at Pennsylvania State University. He is a former tennis professional and has traveled worldwide.

Jane Rogers Black

Jane Black is a resident of Burlington Junction and has served thirty years on the staff of the auxiliary program of Missouri Girls State at William Woods College in Fulton. She is currently serving her 12th year as director. She is active in civic affairs and volunteer activities including the Nodaway County United Way Board, Nodaway County American Red Cross, the St. Francis Hospital Advisory Board, and three nursing homes in Maryville. She and her husband live on a farm east of Burlington Junction. Mrs. Black is a member of the Missouri West Conference of the United Methodist Church and a certified lay speaker.

Roy Blunt

Blunt was elected Missouri's thirty-second Secretary of State on November 6, 1984. Prior to his election as Secretary of State, he served twelve years as County Clerk and as the chief election authority in Springfield and Greene County. He has served as Chairman of the Missouri Housing and Development Commission. Blunt taught history and government at the secondary and college levels. Blunt has authored and co-authored several publications.

Duane D. Christensen

Christensen is the Senior Vice-President and Director of Corporate Communications for Maritz,

Inc., St. Louis. Prior to joining Maritz twenty-six years ago, he spent six years with Phillips Petroleum Company in sales. He was employed as a radio announcer at KBMU in Utah, was sports editor at the *Herald Journal* in Logan, Utah, and later with the *Desert News* in Salt Lake City, Utah. He is currently the Chairman of the Community Services Division and a member of the Executive Committee of the United Way of Greater St. Louis. He also served as Chairperson of the Private Industry Council of St. Louis, is President of the Greater St. Louis Metropolitan Philanthropic Association, and is a member of the Executive Committee of the Higher Education Center of St. Louis.

Ellen R. Conant

Conant is the elected Third District Councilwoman in St. Louis County. She has served as Chairman of the Council. Conant is also a member of various boards of directors including the St. Louis Regional Health Care Corporation, St. Louis University, the United States National Senior Olympics, and the Urban League of Metropolitan St. Louis. She is the St. Louis County Representative for the Missouri Association of Counties and is on the lay advisory board of the St. Louis Metropolitan Medical Society.

Claudine B. Cox, Ph.D.

Dr. Cox is an economist and portfolio manager from Springfield, Missouri. She serves on the executive board of UNICEF in New York City, and she is on the boards of Drury College, William Woods College, and Center Bank of Springfield. Cox has long been involved in international affairs and travels extensively. She and her husband are patrons of the Lester E. Cox Medical Center, a major non-profit hospital. Her husband serves on the Board of Directors of Trans-World Airlines.

William H. Danforth, M.D.

Dr. Danforth is the Chancellor of Washington University in St. Louis. He also serves as a Professor of Internal Medicine at the University. He attended Westminster College, and is a graduate of Princeton University and Harvard Medical School. He has received numerous honorary

degrees from universities and colleges across the nation and has been honored by many awards, such as the Newton D. Baker Award in 1967, the *St. Louis Globe Democrat* Man of the Year Award in 1978, and the Human Relations Award by the American Jewish Committee — St. Louis Chapter in 1980. He serves on the board of directors for Ralston Purina and McDonnell Douglas Corporation.

Caroline A. Ehney

Ehney is a resident of Kansas City where she owns nine separate design-related shops, including "Lauren and Me", a children's clothing and accessories store. She is an interior designer and former school teacher. In 1985, she received the Interior Contract Designer and Interior Residential Designer of the Year Awards. Ehney is a graduate of the University of Missouri at Columbia.

Edward M. Finkelstein

Finkelstein is President of Union Communications Corporation, and is the publisher of the *St. Louis Labor Tribune*. He is a graduate of the University of Missouri-Columbia. Upon graduation, he went on active duty with the United States Air Force as a second lieutenant. He served as a public information officer with the Strategic Air Command and later as Director of Information with SAC's Upper Heyford Air Force Base near Oxford, England. He returned to the United States as a captain receiving the Air Force Commendation Medal for outstanding service in England. He has served as Public Relations Director and Labor Liaison for the Regional Industrial Development Corporation and is the founder of Union Communications Corporation, a communications agency serving the public relations and communication needs of companies, non-profit organizations, political bodies, government leaders, trade unions and trade associations. He is a member of the St. Louis University President's Advisory Council, and is the past chairman of the Board for the St. Louis Chapter of the National Juvenile Diabetes Foundation.

Donald Fischer

Mr. Fischer is active in farming and agribusiness in Corder, Missouri. He is currently serving as Vice-President of the Missouri State

Farm Bureau. He also serves as the Chairman of the Missouri State Soil and Water Districts Commission, and is a member of the Governor's Agricultural Advisory Committee.

Steven W. Gildehaus

Since 1980, Gildehaus has been the Mayor of the City of Grain Valley. He is also the owner and broker of Sterling National Real Estate Corporation. Gildehaus is a member of a partnership involved in commercial and residential construction and remodeling. He is a member of the Private Industry Council, the Suburban Mayors Association, the Grain Valley Area Chamber of Commerce, the Farm and Land Institute, and the Jackson County 21st Century Commission.

Meyer L. Goldman

Goldman received his B.A. from Washington University and his Master of Science (psychology) from Northwestern University. He has also studied at the University of Colorado and Harvard University. He is a retired colonel of the United States Army, and a graduate of the U.S. Army Command and General Staff College. He is the founder of Beacon Printing and Publishing and the *Kansas City Labor Beacon*. He is also employed as a health industry consultant for Prime Health, a health maintenance organization. He has served as a member of the Governor's Task Force on Education and the Governor's Task Force on Higher Education. Goldman is a former member of the Missouri Advisory Committee to the U.S. Civil Rights Commission. He is currently a member of the board of the Kansas City Labor-Management Council, Kansas City Concensus, and is a member of the AFL-CIO. Goldman is also Past Vice-President and a member of the Truman Medical Center's Board of Governors.

David Haggard

David Haggard is active in farming and agribusiness in the Steele, Missouri area. He is President of the American Soybean Association. From 1978 to 1984, he was a member of the Governor's Advisory Council on Agriculture. He also serves as the Chairman of the University of Missouri Delta Center Advisory Committee and



Roy Blunt (left) and John Poelker (right), Missouri 2000 co-chairmen.

is a trustee of the University of Missouri College of Agriculture Foundation. In addition, Haggard serves on the Missouri Coordinating Board for Higher Education, and is Vice-President of the University of Missouri Agriculture Alumni Association.

Jerry M. Hunter, J.D.

Hunter is currently the Director of the Missouri Department of Labor and Industrial Relations. Prior to his appointment to this position by Governor John Ashcroft, he was employed as labor counsel by Kellwood Company in St. Louis. Hunter has also served as a field attorney with the National Labor Relations Board, as a senior trial attorney with the U.S. Equal Employment Opportunity Commission, and a law clerk with the Missouri Court of Appeals — Eastern Division.

He received his B.A. in history and government from the University of Arkansas and his Juris Doctorate from Washington University School of Law. He is a member of the American Bar Association, Phi Alpha Delta Legal Fraternity, and the Jefferson City Chamber of Commerce. He is also a board member of the Missouri Corporation for Science and Technology and has been a volunteer for the United Way, Big Brothers and Big Sisters of Greater St. Louis, and the St. Louis Area Council of the Boy Scouts of America, Inc.

Anne Johnson, D.D.S.

Dr. Johnson is currently in private practice in the Kansas City area. Dr. Johnson provides on-the-job training for dental assistants and she is a mentor for high school and college students interested in health careers and for dental students

at the University of Missouri-Kansas City Dental School. Dr. Johnson was selected one of the top most influential blacks in 1985 by the *Kansas City Globe* and received the 1983 Woman of the Year Award from the High Achievers Chapter of the American Business and Professional Women's Association. She is presently serving as a board member of the Gillis Home for Children and is a member of several dental and health associations.

Al Kemp

Al Kemp serves as the Regional Director of the U.S. Department of Health and Human Services (HHS). As Regional Director and a member of the Senior Executive Service of the U.S., Kemp heads a department with 5,500 employees. After serving as an aide to U.S. Senator John G. Tower, from 1977 to 1981, Kemp served as Assistant to the President and Director of Marketing for T.G. Bancshares, a St. Louis holding company. He was on active duty with the U.S. Army Intelligence from 1969 to 1972, serving as Director of the 5th U.S. Army Language School. He received a B.A. degree in Spanish and economics at Brigham Young University in 1968, and a Masters degree in public administration. Kemp is immediate past chairman of the Greater Kansas City Federal Executive Board (FEB). From 1983 to 1985, he served as the principal spokesman for the FEB which comprises 111 federal agencies and represents 35,000 civilian and military employees.

Clyde G. Lear

Lear is the President and Chief Executive Officer of Learfield Communications Inc., headquartered in Jefferson City. He received his B.A. from Central Methodist College in 1966 and a M.A. in journalism from the University of Missouri in 1968. He has served as President and a member of the Board of Trustees of Memorial Community Hospital. He is Secretary and member of the Board of Curators of Central Methodist College. In 1986, Lear was elected to, and served as chairman of, the Jefferson City Charter Commission. In 1975, he was presented with the Pacesetter Award by the Missouri Chamber of Commerce.

Thomas W. McCarthy, J.D.

McCarthy was born in 1945 in St. Louis. He is a

graduate of St. Louis University High School, St. Louis University, St. Louis University Graduate Business School and School of Law. He is former law clerk to the Missouri Supreme Court. He is a member of the St. Louis Metropolitan and Missouri Bar Associations, the American Arbitration Association, and Alpha Sigma Nu. He was elected to the House in 1980 and then elected to the Missouri Senate in 1982.

James L. Mathewson

Mathewson was born in 1938 in Warsaw, Missouri. He was educated in the Warsaw Public Schools, graduating in 1955. He attended Redding Junior College and California State University. He is a real estate appraiser and has served in the Army. Mathewson was elected to the House in 1974 and re-elected in 1976 and 1978. He was elected in 1980 to the Missouri Senate and was re-elected in 1984. He was elected Senate Majority Floor Leader in 1984 and was re-elected to that position in 1986.

Jane Meyer

Jane Meyer is the Station Manager of Radio Station KTXR in Springfield. She is also an owner and officer in Meyer Communications, a holding company for radio stations in four Missouri communities: Springfield, Fulton, Lexington, and Kennett. Her background also includes experience as a high school teacher, college instructor, and news reporter. Meyer has a B.S. in business education from the University of Missouri-Columbia. She is a member of the Springfield Housing Authority Board and the Springfield Symphony Guild, and the Planning Commission for the proposed Performing Arts Center in Springfield.

John H. Poelker

Poelker is a consultant to the St. Louis Regional Commerce and Growth Association (RCGA) and serves as a member of the board of several profit and not-for-profit organizations. He has served as Executive Director of the Bi-State Development Agency, and Vice-President of RCGA. Poelker has been vice-president of a construction company based in St. Louis. From 1973 to 1977 he

was the Mayor of the City of St. Louis. Prior to that time he had served as Comptroller and Assessor for the City of St. Louis, and from 1942 to 1953 was a special agent for the FBI.

William A. Powell

Powell, a long-time Missouri agribusiness executive, was appointed to serve as Region Seven Administrator for the U.S. Small Business Administration in 1981. Prior to that time, Mr. Powell was President of Powell Agri-Industries, a family farming corporation in Princeton, Missouri. He has been active in many state and national agribusiness associations. From 1968 to 1981, he served as President of the Mid-America Dairymen, Inc. whose membership includes 12,000 dairy farmers in 13 states. Since 1973, he has served on the Executive Committee of the National Milk Producers Federation, including a term as Federation president.

John H. Qualls, Ph.D.

Qualls is Manager of Marketing Research for Monsanto Chemical Company. Dr. Qualls joined Monsanto in 1966 as a senior mathematician in the Management Science Department. Various assignments included a period in Brussels, Belgium, with the company's New Enterprise Division. Prior to his current assignment, Dr. Qualls was manager of economic forecasting in Monsanto's Office of Economic Analysis. His educational background includes a Bachelor of Science in Engineering Science from Washington University in St. Louis, a M.B.A. from Harvard Business School, and a Ph.D. in economics from St. Louis University. He is a member of the *Purchasing Magazine* Board of Economists, the Missouri Chamber of Commerce Education Committee, and the Harvard Industrial Economists Group.

Phillip Schreiber

Mr. Schreiber is President of Sachs Properties, Incorporated, a real estate development corpora-

tion in the St. Louis area. He graduated from the University of Vermont in 1960 and has studied at the University of Massachusetts and Washington University. Schreiber was a captain in the U.S. Air Force with the Air Research and Development Command and was involved in the testing and studies for the manned space program. He has served as Vice-President of the National Association of Industrial and Office Parks, is a member and past president of the Creve Coeur Chamber of Commerce, and First Vice-President of the Chesterfield Chamber of Commerce. He is currently a member of the board of the Mark Twain Bank, the West County Y.M.C.A., CORO, and the State Board of Architects, Engineers, and Land Surveyors.

Burl E. Self, Jr., Ed.D.

Dr. Self is currently an Associate Professor of Planning at Southwest Missouri State University in Springfield. He also is active as a consultant in marketing research, economic development, and comprehensive planning. He is active in real estate development in the Springfield area as well. Self has been involved in many special projects as a consultant or researcher including developing a Wildlife Harvest Information System for the British Columbia Fish and Wildlife Branch; comprehensive plans for the Creek, Seneca-Cayuga, Kiowa and Crow Tribes; and various socio-economic needs assessments for local and state agencies.

